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Medical Tribune
and
Medical News

In Two Sections, Section 1

A B C D

world news of medicine and its practice—fast, accurate, complete

Wednesday, September 8, 1971
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Red Cells Cut Crisis Severity In Sicklemia

Medical Tribune Report

PHILADELPHIA—An exploratory trial of prophylactic red cell transfusions in children with active sickle-cell anemia has reduced the severity and number of their crises, the **National Medical Association** was told here.

Severe crises were reduced to a "minimal point," and all patients were physically stronger throughout the three-and-a-half-year trial, it was reported by Dr. George W. Ward, Associate Professor of Pediatrics at Hahnemann Medical College. He spoke at the N.M.A.'s Pediatric Section.

The findings were made in 39 sicklemic *children who were placed on a program of* regular packed red blood cell transfusions (PRBC) in order to determine if maintaining their blood hemoglobin level closer to [illegible] would have beneficial effects on [illegible] and complications, Dr. Ward [illegible]

The patient series consisted of [illegible] boys and [illegible] girls. Their blood hemoglobin levels were persistently between *6 and 8 Gm.* per 100 ml., and all "had already had symptoms *which were attributable to or* associated with their sicklemia."

The investigations, Dr. Ward commented, sought to keep the blood hemoglobin level at about *9* Gm./100 ml. for the younger children and above 10 Gm./100 ml. for adolescents. When blood hemoglobin was found at or close to these thresholds during the patient's regular clinic visit, a specimen was drawn for cross-matching, and the patient returned within a few days for a PRBC *transfusion.* The transfusions were given in pairs, one day

Continued on page 24

Ear Oximeter Tested

NIH Photo

Experimental ear oximeter measures circulating blood's oxygen content by infrared absorption through ear. It was developed by NASA's Biomedical Ap-[illegible]

World Cancer Registries Key To Environmental Patterns

Medical Tribune World Service

LYON, FRANCE—Scientists at the International Agency for Research on Cancer, a unit closely associated with the World Health Organization, are convinced that *in world patterns of cancer incidence will be found new clues to the environmental* causes of cancer. Dr. John Higginson, director of the agency, believes that approximately 80 per cent of all human cancers are caused or promoted by "exogenous stimuli."

"Take the role of cigarettes," Dr. Higginson told MEDICAL TRIBUNE. "It was only after 1945 that the epidemiological *method was used for etiological studies.* But by 1945 the evidence that was in was enough to convince *me personally to stop* smoking cigarettes."

The heart of the agency's global epidemiologic studies lies in a series of cancer registries for age-specific statistics—some

Second of four articles.

set up by the agency, others run by national governments, some by local govern-[illegible]

Computer Generates Study Curriculum For Suicidology

Medical Tribune Report

CINCINNATI—The development and successful testing of a computer-generated curriculum for suicide studies that permits individual instructors to introduce a syllabus tailor-made for their students was reported here [illegible] said [illegible] on [illegible] Health Sciences here.

[illegible] disciplinary mental health curriculum, said to be the first of its kind, has been piloted at a wide variety of institutions, among them three schools of mbedicine—Loyola University, St. Louis University, and the University of Texas Medical Branch at Galveston. In addition, a pilot program was also carried out at the National Naval Medical Center, Bethesda, Md.

The report on the curriculum and a demonstration *of its workings were made* to the meeting by Dr. *Harvey L. P. Resnik,* chief of the Center *for Studies of Suicide* Prevention of the National Institute of Mental Health; George R. Murray, Ph.D., vice-president of KMB Health Systems, Inc., Palo Alto, Calif.; and Berkley C. Hathorne, Ph.D., coordinator of education and training at the NIMH suicide studies center.

DR. RESNIK

The Center for Studies of Suicide Prevention will maintain and operate the program. KMB Health Systems is under con*tract to the center to assist in the planning,* development, and evaluation of the curric*ulum system.*

Although suicide is a major public health *problem—ranking 11th as a cause of death* —its introduction into the curriculums for training the wide variety of professionals and volunteer workers who are likely to encounter the phenomenon has been spotty, Dr. Resnik declared.

He stressed that the stimulus to develop the computer-generated curriculum stemmed from the very variety of disciplines requiring such knowledge. The target groups for such information, he noted, range from schools of medicine, nursing, social work, and theology to police training programs and community courses for volunteer workers.

The work of putting the curriculum together began with two rounds of sessions with some 50 suicide *specialists drawn* from the many disciplines concerned. The

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'A Lot More Work' Necessary Before Human VD Vaccine Use

Medical Tribune Report

WASHINGTON—More than four years have gone by *since the first successful ex*periments in immunizing animals against syphilis, but there is still "a lot of work to do before we can apply it to humans," a VD vaccine expert reported here.

Even in the rabbit experiments a practical dosage schedule has yet to be achieved, *James N. Miller, Ph.D., acknowledged* after a workshop session on gonorrhea and syphilis at the first **International Congress of Immunology.**

Dr. Miller, whose group at the University of California at Los Angeles is one of the very few to report an experimental *vaccine success, said the current* investigative difficulties include such basic matters as the *inability to culture the syphilis-*causing Treponema pallidum in vitro and the problem of storing the organisms (harvested from infected rabbits) without a loss of antigenicity.

He conceded that successful immunization of rabbits required "rather large doses *over a long time"* with T. pallidum organisms inactivated by gamma radiation from a cobalt[60] source. The dosage—intravenous—was twice weekly over 37 weeks for *a total of 3.7 billion organisms injected.*

However, he said, the immunity conferred by this procedure appeared both complete and long-lasting, "for at least a year." Other immunization attempts using two or three times as many organisms over a shorter period than 37 weeks af*forded* less complete *protection* (an asymptomatic infection was sometimes detectable). *A lesser degree of immunity also* followed trials of vaccine produced by inactivating the organism with penicillin or simply with week-long refrigeration.

In the works now, he said, are trials of organisms quick-frozen and stored in liquid nitrogen. Also upcoming is a test dosage schedule of large numbers of organisms, injected intramuscularly three times *at three-week intervals.*

"First, we need more organisms, which is a production problem," *said Dr. Miller.* "Then we have to develop a practical dosage schedule that still confers immunity. And before a vaccine is ever made avail-

Continued on page 18

Detoxifying Study Might Prove Aid In Pollution War

Medical Tribune Report

COLUMBIA, Mo.—The study of means to reinforce the body's detoxication system should be of value *in dealing* with the problem of environmental pollution, the fifth annual **Conference on Trace Substances in Environmental Health** was told here.

"In a situation in which an organism and a *toxic* chemical exist in the same locality, the organism can escape serious harm if either or both of two things happen," according to David J. Wagstaff, Ph.D., of the Department of Veterinary Physiology and Pharmacology at the University of Missouri.

"First, contact between organism and toxicant is avoided—i.e., toxicant concentration is kept low *in the water, air, food,* and other materials contacting the organism. Or, second, the organism *detoxifies* the toxicant. Both of these approaches should be *fully* researched and applied by our society. . . .

"Organisms and heavy metals or other

Continued on page 18

Suppression of Permanent Abortion Record Urged

Medical Tribune World Service

HELSINKI—Applications for abortion should never be a subject of permanent record, Norway's director general of health services warned here.

"This is an essential precaution, which is already current practice in Norway, in case the request is not granted," Dr. Karl Evang told MEDICAL TRIBUNE. "If such records are destroyed, there is no danger *that* a child might one day discover it was not wanted."

Dr. *Evang, who spoke* to a World Health Organization working group meeting here about *the* administrative aspects of providing services for induced *abortion*, pointed out that a service apparatus should be client-oriented. The *procedure* should not be too time-consuming, both from biologic (fetal growth) and *psychologic* aspects.

Invasion of a person's privacy must be as limited *as possible, Dr. Evang* added, and professional secrecy must be guaranteed. He also stressed *the desirability of* a decentralized administrative system to permit rapid decisions without lengthy referrals to higher authorities. If this leads to a certain degree of inequality, he said, this is a price one must pay.

Late Regression Found in Therapy For Parkinsonism

Medical Tribune World Service

ROME—A one-year follow-up of amantadine treatment in 44 parkinsonism patients showed a "marked regression" in the improvement that had been noted during the first six months of therapy, Dr. G. Dalle Ore, of the Hospital Institutes of Verona, told the De Angeli Institute Convention on Amantadine.

"The regression is most evident in the case of the symptoms that benefit most from the treatment—rigidity and akinesis," he said.

In the first six months of a daily dosage of 250 to 300 mg., there was a "notable reduction in rigidity." Twenty-one patients showed excellent results, 12 good results, and one fair improvement. Six showed no change, and four worsened.

Daily Life Improved

The first six months also showed a marked improvement in the daily life of the patients, Dr. Dalle Ore reported. Eight patients achieved complete autonomy, 30 were self-sufficient, six needed partial aid, and none needed complete assistance.

"At 12 months the picture is less comforting," he said. "The number of completely autonomous cases has fallen to three, the self-sufficient to 24, and 17 patients need outside help. Of the latter, six need complete assistance."

He commented that amantadine works [illegible] better absorbed [illegible] weeks of treatment but that "long[illegible] firm in the majority [illegible] the major therapeutic efficiency of levodopa, considering that in patients treated with this drug, after a year of treatment it is possible to demonstrate major improvement in akinesis, rigidity, and, above all, in tremors."

Coauthors were A. Bricolo, P. Buffatti, A. Bazzan, and C. Mazza.

■

Ape Gets Marrow Graft

WHO Photo

Immunologic deficiency diseases are under study at the Radiobiological Institute, an animal research center, in Rijswijk, the Netherlands. Above, a bone marrow transplant on a monkey.

Medical Schools Will Be Added To State Universities in Japan

Medical Tribune World Service

TOKYO—Japan's Ministry of Education has launched a plan to increase enrollment in state medical schools by 1,500 over a 10-year period beginning in 1972. Medical schools will be opened in three state universities, Education Minister Michita Sakata announced.

The announcement follows growing public concern over the shortage of facilities for state training in medicine. Competition is so keen that several hundred students compete for each place available at the [illegible] state and public medical schools.

This has exacerbated the shortage of doctors, particularly in rural areas, and resulted in an overdependence on Japan's 13 private medical schools, where tuition is high. Today a donation of up to $28,000 is often required for enrollment at a private medical school.

■

Regimen Advanced to Cut Loss Of Ability in Child Dystrophy

Medical Tribune World Service

JANSKE LAZNE, CZECHOSLOVAKIA—Loss of functional capacities can be delayed for more than five years in children with rapidly evolving Duchenne muscle dystrophy by a regimen including a vasodilator drug, hot baths, massage, and passive muscle stretching, providing the diagnosis is made early, according to Dr. J. Demos, director of research, Institut de Pathologie Moléculaire, University of Paris. These results constitute new evidence for the microcirculatory origin of the disease, he told the second Conference on Myopathies here.

Values In Newborns Compared

While nondystrophic newborns have serum creatine kinase values of not more than 445 I.U., with activity decreasing in the first years of life, dystrophic newborn boys were found by Dr. Demos' institute to have values between 755 and 4,482 I.U., increasing thereafter up to the age of three. The SCK level can thus be used to diagnose the disease in the first few months of life.

The daily program recommended by Dr. Demos includes 60-120 mg. of (p-hydroxyphenyl)butylaminoethanol, a peripheral vasodilator, daily; a half-hour morning hot bath (38° C., or 100° F.), followed by manual massage of shoulder, arm, buttock, thigh, legs, and back muscles; passive stretching of muscles of the foot, knee, and hip; use of splints at night; and no active muscular re-education, climbing stairs, or repeated standing.

This approach has been used for eight years, with 100 [illegible] treated children in the same family shows retardation of the disease by more than five years in the treated subjects. This is important, since such children usually lose the ability to walk at nine or 10 years.

Since he suggested a microcirculatory origin of the disease about a decade ago, Dr. Demos said, circulatory troubles in dystrophic patients have been observed by a number of authors. In his experience, 60 per cent of dystrophic patients have cerebral disturbances. Of the 100 child patients described, 95 had significant growth retardation.

Observations in apparently normal carriers, he said, suggest that these circulatory abnormalities are not caused by muscle lesion but by the genetic mutation responsible for the disease. Mothers known to carry dystrophy because of an X-chromosome defect have Reynaud's disease in 50 per cent of cases, an often significant decrease of peripheral circulation time, and a positive and significant correlation between circulation time and serum aldolase and SCK levels.

Finally, Dr. Demos reported, his institute has shown, by electrophoresis of blood platelet extracts, the existence of an enzyme that catalyzes the oxidation of epinephrine into adrenochrome and of DOPA into melanine. This enzyme, known as diphenol oxidase, displays abnormal behavior both in the dystrophic subject and in carriers, and this "opens the way to a new pathogenic study of the disease at the molecular level in addition to the systemic level where it has been concentrated until now."

■

Psychosis Incidence High In Australian Workers

[illegible] Unskilled workers had a higher incidence of psychotic and personality disorders than other groups but professional and sales people were more prone to psychoneurotic disorders, according to a survey conducted by Dr. A. Stoller, chairman of the Mental Health Authority of the State of Victoria.

The survey also found that women were more prone than men to suffer psychiatric disorders, the ratio being approximately three to two, and that the 33-44 age bracket had the highest occurrence for both sexes.

Dr. Stoller and Dr. J. Krupinski, of Victoria's Mental Research Institute, collected data on 258,579 illnesses affecting 172,078 patients in a year.

■

Bill Fails, Homosexuality Is Still Illegal in Israel

JERUSALEM, ISRAEL—The Israeli Parliament has defeated a draft law to legalize homosexual acts between consenting adults.

Religious parties played a leading part in defeating the law, which was rejected by 38 votes to 15. Homosexual behavior is currently punishable with a 10-year jail sentence, although the law is rarely invoked.

British Group Drafts Safeguards Against Faulty Operations

Medical Tribune World Service

LONDON—Safeguards against performance of operations on the wrong patient and against failure to remove swabs and instruments from the patient's body have been drafted here.

The safeguards were prepared by the Medical Defense Union and the Royal College of Nursing.

A total of 126 wrong operations—either with the wrong patient or on the wrong limb, side, or digit—were reported to the union in the period 1963-68. In addition, 203 cases of swabs' or instruments' being left inside patients after operation were reported during the same period.

The union said routine procedures should be adopted by all hospitals to ensure against negligence. In the case of wrong operations, it added:

"These avoidable accidents are indefensible, and any claim based upon the performance of a wrong operation cannot be resisted."

Among the safeguards suggested for preventing wrong operations are:

- **Immediate labelling of patients on entry into the hospital.**
- **Designation of one person, usually the ward sister, to ensure that the correct patient is sent to the operating theater.**
- **Marking of the side on which the operation should be performed in indelible pencil before the patient is sent to the operating theater.**

Emphasis on speed in critical cases and work under pressure were cited as potential causes for accidents.

Recommended safeguards include careful accounting for all swabs and packs used during the operation, however minor or superficial. All instruments used should be checked before and after the operation.

The union noted that swabs are easily left in body cavities and said the risk in operations through the mouth, such as adenoidectomy, is especially great. In obstetric operations, it is a good rule never to put swabs in the vagina, the union added.

Dr. Best Gets Prize

SAO PAULO, BRAZIL—Dr. Charles Best, codiscoverer of insulin, has been named first recipient of the $25,000 Science Biennial Prize, awarded by the Biennial Foundation of Brazil.

The prize, commemorating the 50th anniversary of the discovery of insulin, will be given to Dr. Best by Brazilian President Emilio Garrastazu Medici, at the third Science Biennial here.

NEWS INDEX

CLINICAL NEWS NOTE: "The treatment of deep burns and other types of graft suggest that skin from uremic donors provokes a less vigorous immune rejection response than normal skin. This may be due to antigen masking by substances produced in uremia." (Drs. H. Pierer and H. Fladerer; see page 3.)

FEATURE INDEX

Coming next issue: see page 3

MEDICAL TRIBUNE *is published each Wednesday by Medical Tribune, Inc., 315 East 62nd St., New York, N.Y., 10021, Controlled Circulation postage paid at Farmingdale, N.Y., 11735. Subscription $12.50.*

Uremic Donor Skin Preferred In Burn Grafts

Medical Tribune World Service

MELBOURNE, AUSTRALIA—Evidence from animal and human experiments in the treatment of deep burns and other types of graft suggests that skin from uremic donors provokes a less vigorous immune rejection response than normal skin. This may be due to antigen masking by substances produced in uremia.

This hypothesis was put forward at the fifth International Congress of Plastic and Reconstructive Surgery here by Drs. H. Pierer and H. Fladerer, Department of Surgery, University of Graz, Austria.

Following animal experimentation on rabbits, Dr. Pierer reported, a study was made of four human patients aged from 56 to 80, on whom small test strips of uremic skin were applied during the autoplastic covering of small skin defects and the time of the beginning of rejection was determined. Simultaneously transplanted nonuremic skin sections survived eight, 10, 13, and 14 days in this group. In contrast, survival time of uremic skin homografts applied as small test strips were 20, 23, 29, and 32 days. Again the results were highly significant statistically.

Cadaver Skin Use Reported

Dr. Pierer next reported the use of cadaver uremic skin in burn cases. The research group uses only cadaver skin to fulfill requirements for homologous skin for covering severe burns. This skin qualifies as uremic only when the cause of death was in fact uremia or when a residual nitrogen over 100 mg. per 100 ml. had existed for an extended period. The split skin is removed under sterile conditions and stored at 4° C. for not more than 14 days. Blood group compatibility was not determined and tissue typing was not performed in any case before death.

Six patients ranging in age from two to 61 years with severe burns over 30 per cent to 60 per cent of the body surface were investigated. It was noted that rejection began relatively uniformly after approximately four weeks without adverse effect on the general condition and without temperature increase. Rejection lasted at least one week.

The decrease in the wound surface was striking in all cases with alternating arrangements of auto- and homotransplants. The saving of autologous skin here amounted to more than half of that originally required. The authors concluded that the uremic condition of the skin helped the rejection to proceed very slowly and with very slight histologic reaction.

The nature of the changes in the graft caused by uremia remains unexplained. A reasonable assumption, the authors stated, would be a reduced antigenicity, possibly because of masking of antigen caused by substances produced in uremia.

Physician Aides to Be Trained

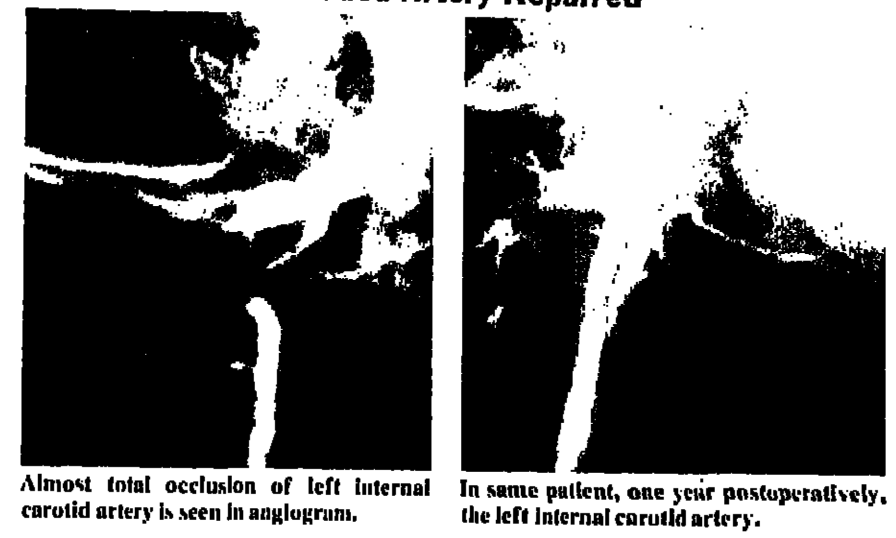
BIRMINGHAM, ALA.—A program to train physicians' assistants in diabetes has been launched here by the University of Alabama and the School of Community and Allied Health Resources.

Believed to be the first of its kind, the two-year program will train students to relieve diabetologists of routine duties, take patient histories, do physical exams, and provide routine patient analyses.

Now I am at a loss to know whether it be my hare's foot which is my preservation; for I never had a fit of the collique since I wore it, or whether it be my taking of a pill of turpentine every morning.

Samuel Pepys (1633-1703)
Diary, March 26, 1665

Occluded Artery Repaired



Almost total occlusion of left internal carotid artery is seen in angiogram. **In same patient, one year postoperatively, the left internal carotid artery.**

Reimplantation of Carotid Advised In Children With Blocked Arteries

Medical Tribune Report

PHILADELPHIA—Reimplantation of the internal carotid artery to a lower level of the common carotid was recommended here as the preferred treatment for children suffering from obstructive elongation and kinking of the internal carotid arteries.

Drs. Charles M. Parrish and James P. Byrne, Jr., of the University of Utah College of Medicine, reported their experience with five children suffering from this malformation to a meeting here of the Society for Vascular Surgery. Four of the children were treated surgically; the fifth, a six-year-old girl with only moderate tortuosity of the left internal carotid, has been maintained on an anticonvulsant.

The physicians observed that, while the obstruction of cerebral blood flow secondary to the defect could result in permanent neurologic deficits, convulsive disorders, and transient ischemic attacks, the entity was less frequently recognized in children than in adults.

A range of symptoms appeared in the children whose cases they reviewed:

- In the first case, a five-year-old boy experienced malaise and headache 24 hours before admission and developed status epilepticus 45 minutes before admission. He was mildly febrile, comatose, and cyanotic, with shallow respiration and right hemiparesis.
- In the second case, a five-year-old boy developed progressive aphasia and right hemiparesis. He was afebrile.
- The third patient, a 12-year-old boy, had a history of four nocturnal generalized convulsions in 10 months, each followed by hemiparesis and dysarthria that completely cleared in 30 minutes.
- The fourth, a four-year-old boy, was admitted with right hemiparesis. He was afebrile but showed right central facial paralysis and aphonic aphasia.

For diagnostic purposes, percutaneous angiography was performed through a common femoral artery under general anesthesia.

"Because of the small-sized vessels, shortening of the common carotid artery by segmental resection and end-to-end anastomosis was used in case 4," the investigators reported.

Otherwise, after straightening of the internal carotids, "the origin of the internal carotid artery was divided by a diagonal incision," they said. "The opening in the common carotid was closed. The internal carotid was reimplanted 2 to 4 cm. down the common carotid by an end-to-side anastomosis."

Investigators Say Sugar Has Ability To Stimulate Fat Production in Body

Medical Tribune Report

UPTON, N.Y.—Investigators at Brookhaven National Laboratory here have turned up evidence that sugar has the ability to stimulate production of fat in the body in some way apart from its calorie content in the diet.

The stimulation of fat production by sugar appears to be particularly great in women taking oral contraceptives, according to a team of investigators headed by Dr. Walton W. Shreeve.

Ten female and two male patients, most of whom were obese, were first put on a high-starch–low-sugar diet (9:1 ratio), then on a high-sugar–low-starch diet (9:1). Both diets contained the same amount of calories (about 2,500 daily) and the same total carbohydrate (about 60 per cent of total calories).

After seven to 10 days on each diet the patient was given by mouth about 100 Gm. of dissolved sugar labeled with carbon^{14}. Blood samples were then taken at one, three, six, and 12 hours after each "meal" of the labeled sugar. The blood specimens were fractionated to separate out the serum lipids, which were then analyzed in a scintillation counter to determine the C^{14} content.

In each case the concentration of C^{14} in serum triglycerides attained a peak around the three-to-six-hour period and then declined. After the high-sugar diet, however, the percentage of the labeled sugar converted to triglycerides was two to five times greater than in the same patients when on the high-starch diet.

As expected from earlier studies, the concentration of the total serum triglycerides (labeled and unlabeled) also sometimes increased after the high-sugar diet, but not as much or as often as the increase in C^{14} content. The findings support the concept of increased formation of fat with possibly increased turnover and transfer to other tissues from the blood, according to Dr. Shreeve.

Dr. Shreeve and his colleagues also studied the effect of the high-sugar diet on insulin production and found that during the first hour or two after taking the test sugar by mouth there was, on the average, 15 per cent more insulin in the blood when on the high-sugar than when on the high-starch diet.

Other members of the research team were Drs. Ching-Hui Wu, Mitsuri Hoshi, and Ryuichi Kikkawa.

COMING NEXT ISSUE

- **Hodgkin's disease**
  Long-term study finds evidence of dual virus infection.
- **Bacteremia**
  Carbon^{14} detection is called rapid and sensitive.
- **Pre-eclampsia**
  Detection eased by ultrasound blood pressure instrument.

Panel Will Appraise Malpractice Actions Begun in New York

Medical Tribune Report

NEW YORK—All medical malpractice suits brought against physicians and hospitals before the New York State Supreme Court in Manhattan, beginning with the fall term, will first be heard by a three-member mediation panel, Presiding Justice Harold A. Stevens, of the Appellate Division, First Department, announced.

Each panel will consist of a Supreme Court justice, a lawyer, and a physician, and its aim will be to arrive at an amicable, voluntary disposition of the case, thus avoiding lengthy trials, especially in cases concerning highly technical matters, and relieving crowded court calendars, Justice Stevens explained.

Parties appearing before a panel may be represented by counsel, but he emphasized that the hearings will be informal, that no stenographic record will be kept, and that, if the case proceeds to trial, the following rules will apply:

- Statements made in the course of the hearings will not be admissible at trial.
- The jurist, physician, and lawyer serving on the mediation panel will be ineligible to act as judge, witness, counsel, or otherwise thereafter in the case.

First Such Plan in Country

According to Justice Stevens, this is the first plan in the country to combine the personnel and talents of the judiciary with those of the legal and medical professions in such mediation procedures.

The panels will preside over a new special part of the court, he said, and the names of the panelists and the calendars of cases assigned to them will be published in the *New York Law Journal* along with other court calendars and assignments.

He noted that the plan revolved from a public conference sponsored last year by the Interprofessional Committee of Doctors and Lawyers and from subsequent studies and conferences conducted by the court and the committee.

The medical representatives are appointed on recommendation of the New York County Medical Society. Present physician members are Dr. Carl Goldmark, Jr., vice-chairman, and Drs. Edgar P. Berry, W. Graham Knox, Stephen Nordlicht, and George W. Slaughter.

Justice Stevens' statement said that appointment of the nonjudiciary panelists, to be designated as special mediators, "is expected to be from medical specialists in various branches of medicine upon recommendation of the medical society and of lawyers chosen mainly because of broad trial experience."

Normal Cells Made Malignant by Virus

Medical Tribune Report

SAN DIEGO, CALIF.—Two Salk Institute scientists, Walter Eckhart, Ph.D., and Dr. Renato Dulbecco, and a third from Princeton University, Max M. Burger, Ph.D., have reported that a virus can change the surface characteristics of a cell in such a way as to make it malignant.

Their experiments have used two small DNA viruses, polyoma and SV40.

Earlier work by Dr. Dulbecco showed that viruses can change cells from normal to malignant and that viral genes persist in the malignant cells.

Last December, Dr. Dulbecco and Dr. Eckhart reported that these viral-induced changes can persist through succeeding generations of cells and that the changes depend on the function of a viral gene in the malignant cells.

Now, the Eckhart-Dulbecco-Burger team has shown, using polyoma virus, that the changes are to the surface of the cell, keeping it in a state that prevents it from receiving signals from the environment that normally would stop it from reproducing itself.

Anxiety—frequent cause of gastrointestinal complaints or concomitant of gastrointestinal symptoms. Gastrointestinal complaints may be signals of functional gastrointestinal disorder or of organic gastrointestinal disease. In either case, severe anxiety frequently plays a prominent role in causing functional complaints or in complicating organic disease. Whenever excessive anxiety is a significant component of the clinical profile, adjunctive use of Librium® (chlordiazepoxide HCl) may be of value.

his gastrointestinal complaints are as real as

The normal duodenal bulb is generally ovoid or triangular in shape.
His gastrointestinal complaints of bloating, sour stomach and nausea
He wants to know if he may have an ulcer, but thorough examination [illegible] x-rays justify his high level of concern and distress.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
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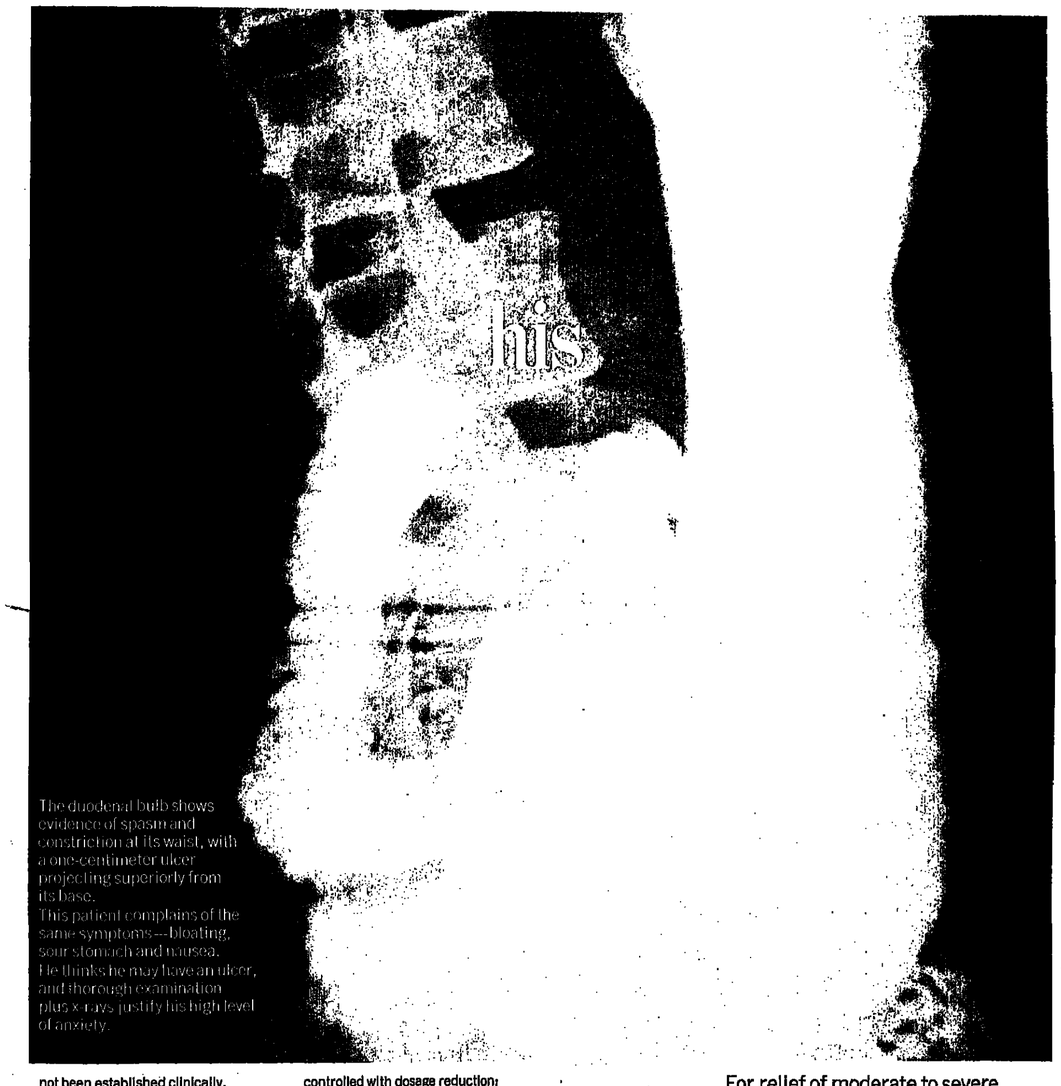
Librium (chlordiazepoxide HCl) is used concomitantly with certain specific types of other classes of drugs, such as anticholinergics, antacids and mucosal coating agents, whenever excessive anxiety contributes to gastrointestinal complaints or symptoms.



his

The duodenal bulb shows evidence of spasm and constriction at its waist, with a one-centimeter ulcer projecting superiorly from its base.
This patient complains of the same symptoms—bloating, sour stomach and nausea.
He thinks he may have an ulcer, and thorough examination plus x-rays justify his high level of anxiety.

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adjunctive

Librium® 10 mg (chlordiazepoxide HCl)

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Claim Antimicrobe Substance To Be Present in Human Skin

Medical Tribune Report

BOSTON—Indirect evidence for the presence of antimicrobial substances in human skin was presented here to the Society for Investigative Dermatology by Raza Aly, Ph.D., and his co-workers from the University of California School of Medicine in San Francisco.

Citing reports by other investigators that such substances exist in the lipid fraction of skin secretions and have been shown to rapidly kill a variety of microorganisms in vitro, Dr. Aly suggested that "if such agents are present on the skin surface, their removal should allow increased multiplication of applied organisms."

He and his co-workers found that, when one forearm was wiped with lipid solvents prior to application of the microorganisms, the destruction of Staphylococcus aureus, Streptococcus pyogenes, and Candida albicans was significantly reduced in comparison to the destruction of the same microorganisms on a control forearm.

Healthy white male adult prison volunteers, who had not washed with germicidal soaps for seven days prior to the experiment, were used as subjects. One forearm of each was washed for five minutes with acetone and the other forearm used as a control. The organisms were placed on the skin and covered immediately with plastic protective cups to prevent drying. After five hours, the organisms were harvested by a modified Patchman-Burtenshaw method.

Test Results Cited

Dr. Aly cited the following results:

- When Staph. aureus was applied (20 subjects), acetone-washed forearms had two- to 510-fold more organisms than the controls at five hours. A marked decrease in count from the original was seen in the controls, while the incubation period allowed persistence but not multiplication of the test organisms on the acetone-washed area.
- With Str. pyogenes (10 subjects), a decrease in average count was noted in both forearms, with the reduction greater in the controls. A two- to 510-fold greater count was obtained in the acetone-washed area.

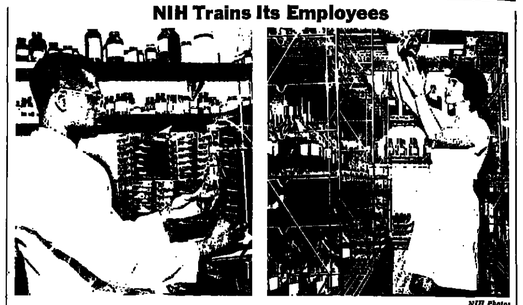
"Besides the obvious difference in counts between the two forearms, this experiment also illustrated the decreased ability of Str. pyogenes to survive on human skin as compared to Staph. aureus and C. albicans," Dr. Aly noted.

- C. albicans (10 subjects) was found to thrive better than either Str. pyogenes and Staph. aureus persistence, as did the forecontrol arms, with two- to 200-fold more on the acetone.
- No significant differences between washed and control arms were noted with Pseudomonas aeruginosa and Escherichia coli.

Dr. Aly said two additional experiments showed that the forehead did not inhibit Staph. aureus persistence, as did the forearm, and the lipid solvent effect was demonstrable two hours after the organisms were applied but not at five hours. He said that "we do not interpret this data as disproof of the already demonstrated role of desiccation. We realize that drying is one of the most important factors in the disappearance of many bacteria, especially gram-negative rods. However, we do suggest a re-examination of the role of skin lipids or other antimicrobial substances in human skin."

Coauthors were Drs. Howard I. Maibach, Henry R. Shinefield, and Walter G. Strauss.

NIH Trains Its Employees



NIH Photos

Courses in lab animal care, glass blowing, administration, and other subjects are sponsored throughout the year by the Division of Research Services to further train National Institutes of Health employees. Right, Anita Biser checks quality control samples of tissue culture media. Left, Frank King uses his method of dispensing thermolabile bacteriologic media. Both completed the D.R.S. basic chemistry class.

Cardiologists Begin Survey of Manpower

Medical Tribune Report

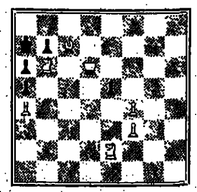
BETHESDA, MD.—A 15-month study of what the United States has and needs in professional manpower for cardiovascular diseases has been launched under the auspices of the American College of Cardiology, serving as administrator for a $126,655 National Heart and Lung Institute contract. The study, to include questionnaires to several thousand practicing cardiologists, will be conducted by a team of investigators in medical education at the University of Southern California, who will work under a national advisory committee.

Stephen Abrahamson, Ph.D., Professor of Education at U.S.C., will be project director, and Dr. Forrest H. Adams, president of the American College of Cardiology, will be principal investigator and chairman of the advisory committee.

The study will yield data that will give a first-time look at present and future needs for manpower serving "the greatest and most important health problem in the United States as well as in many parts of the world," Dr. Adams said.

Chess Problem

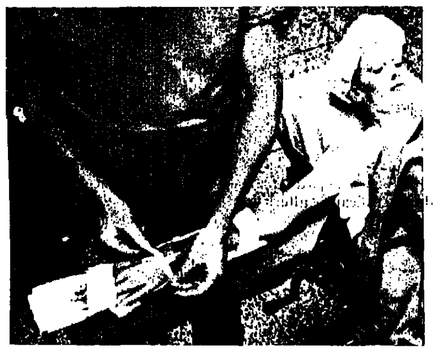
Black



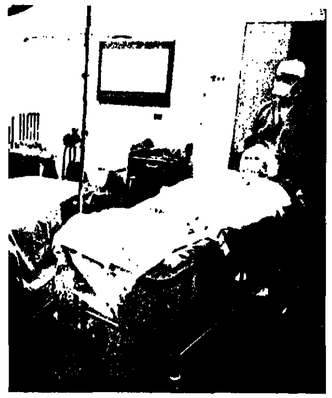
White

White to play and mate with fourth move. See page 20.

One to two hours before surgery, 10 mg Injectable Valium (diazepam) I.M.



surroundings and disturbing procedures. Perhaps best of all, Injectable



can promptly calm, lessening anxiety and tension associated with strange

Premedication for surgery

Injectable Valium (diazepam) is a useful premedicant for reducing undue anxiety. Recall of preoperative procedures is markedly diminished. When given in conjunction with narcotics, a reduction of narcotic dosage should be considered. (See summary of prescribing information.) Injectable Valium should not be mixed with other drugs, solutions, or fluids. The new 10-mg disposable syringe can help you observe this precaution at the same time it helps assure aseptic handling. Injectable Valium seldom significantly alters vital signs. Nevertheless, there have been infrequent reports of hypotension and rare reports of apnea and cardiac arrest, usually following I. V. administration. Resuscitative facilities should be available.

To relieve excessive preoperative anxiety, remember Injectable Valium (5 mg/ml) 2-ml ampul, 10-ml vial, 2-ml disposable syringe.

Valium (diazepam) markedly diminishes recall of the preoperative procedure.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: relief of skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; tetanus; status epilepticus and severe recurrent seizures; anxiety prior to gastroscopy, esophagoscopy, and surgical procedures; cardioversion (I.V.).

Contraindicated: In infants; in patients with known hypersensitivity to the drug; in acute narrow angle glaucoma; may be used in patients with open angle glaucoma receiving appropriate therapy.

Warnings: *Inject I.V. slowly, directly into vein; take at least one minute for each 5 mg (1 ml) given. Do not mix or dilute with other solutions or drugs. Do not add to I.V. fluids.* Rare reports of apnea or cardiac arrest noted, usually following I.V. administration, especially in elderly or very ill and those with limited pulmonary reserve; duration is brief; resuscitative facilities should be available. Not recommended as sole treatment for psychotic or severely depressed patients. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs. Caution against hazardous occupations requiring complete mental alertness. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard to mother and child.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium, such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Not recommended for bronchoscopy, laryngoscopy, obstetrical use, or in diagnostic procedures other than gastroscopy and esophagoscopy. Laryngospasm and increased cough reflex are possible during gastroscopy; necessary countermeasures should be available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Since effect with narcotics may be additive, appropriate reduction in narcotic dosage is possible. Use lower doses (2 to 5 mg) for elderly and debilitated. Safety and efficacy in children under 12 not established.

Side Effects: Drowsiness, fatigue, ataxia, confusion, depression, constipation, dysarthria, diplopia, headache, hypoactivity, hiccups, hypotension, incontinence, jaundice, nausea, changes in libido, changes in salivation, phlebitis at injection site, urinary retention, skin rash, syncope, slurred speech, urticaria, tremor, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, use of the drug should be discontinued. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy. Minor EEG changes, usually low-voltage fast activity, of no known significance.

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The Consultant

DR. DONALD A. GOSS
Professor and Chairman, Department of Obstetrics and Gynecology, Vanderbilt University School of Medicine, Nashville, Tenn.

What's new and important in infertility research?

There are several exciting areas in basic research in infertility which will soon be applied clinically. Primary among these is the research into the function of the prostaglandins. Another research area is the identification of steroid hormone receptor sites within sensitive tissues. These studies may well lead to a better understanding not only of problems related to infertility and steroid end-organ dysfunction but also provide a more physiologic means of contraception.

In clinical infertility the availability of clomiphene citrate and human menopausal gonadotropin for ovulation induction has received widespread utilization and provided the opportunity for childbearing to many families heretofore infertile. The surgical research done by Dr. Mulligan and his coworkers in tuboplasty and the development of other surgical procedures related to infertility represents a great advance.


DR. GOSS

What is the risk of mongolism and other congenital abnormalities for mothers past the age of 40? Is paternal age a factor in the incidence of congenital abnormalities?

There are varying reports concerning the incidence of congenital abnormalities in offspring of women over the age of 40, varying from 5 to 10 per cent. Of this group, mongolism represents the most common congenital abnormality that will carry to term. It must be emphasized that most individuals carrying a fetus with abnormal chromosomes will abort; therefore the absolute incidence is somewhat obscured by this factor. Maternal age, however, does appear to be significantly associated with the higher incidence of chromosome abnormalities. The importance of amniocentesis and karyotyping cannot be overemphasized. Most major medical centers today can provide this service and identify the fetus with grossly abnormal chromosomes.

What are the signs of choriocarcinoma? Should aspiration of amniotic fluid be carried out for diagnostic confirmation if trophoblastic disease is suspected during pregnancy?

There are several factors that are significant in establishing the diagnosis of choriocarcinoma. Every physician should be suspicious of the diagnosis of trophoblastic disease especially in patients who have a persistent watery discharge associated with intermittent bleeding. Malignant trophoblastic disease may occur as a primary tumor of ovarian structures or may be seen following fertilization—i.e., after miscarriage, delivery, or benign mole. When the diagnosis is suspected, amniogram with a water-soluble contrast medium is very helpful.

Amniocentesis and amniogram do carry a slight risk in normal pregnancy, but the procedure is relatively safe when done under image intensifier and using small amounts of dye.

Ultrasound offers an excellent diagnostic method for differentiation between normal pregnancy and trophoblastic disease. These techniques, now unfortunately available only in large medical centers, undoubtedly will be available throughout the country in a few years. Although the analysis of human chorionic gonadotropin titers is occasionally useful in the diagnosis, it must be remembered that in most instances the patient with trophoblastic disease will have HCG titers within the range seen in normal pregnancy.

The use of HCG titers is especially important in following the patient once diagnosis has been established. Following a negative result in a routine pregnancy test it is important that the patient be followed with radioimmunoassay for human chorionic gonadotropin for at least one year before conception be allowed. It is unfortunate that even today most of our patients referred with trophoblastic disease are not identified before the process has become metastatic. With adequate chemotherapy, however, a significant majority of these patients are completely cured without removal of their pelvic organs.

Is hypertension, if adequately controlled, a contraindication to pregnancy? What antihypertensive regimen do you prefer, and what drugs should be avoided?

This is a very difficult question, because much depends upon the etiology of the patient's hypertension and whether or not the hypertension pre-existed before pregnancy occurred. If the hypertension can be controlled before conception and a positive diagnosis as to etiology established, the patient can maintain an uncomplicated pregnancy to term under adequate supervision. It is important, however, to eliminate those patients with renal disease, renal artery stenosis, etc., which might be cared for in a manner other than medical management of their hypertension.

Consultation with an internist is especially important. Careful attention to dietary sodium intake and use of diuretics may be necessary. One cannot specify specific antihypertensive regimen for all pregnant patients because the drugs utilized depend upon the etiology of the patient's hypertension. Hypertension appearing during pregnancy, especially the third trimester, is easily managed in most instances with diuresis, careful attention to sodium intake, and rest.

One drug which we feel should be avoided in pregnancy because of its rapid action and effect on electrolyte metabolism is furosemide. During the past year we have had one maternal mortality associated with the use of this drug and several patients become rapidly depleted in electrolytes. Therefore we prefer slower acting antihypertensive and diuretic agents.

Is it true that increased frequency of intercourse favors conception of males?

A great deal of research has been conducted in animals concerning the frequency and timing of intercourse in relation to the male/female ratio. At present there is very little statistical data available in humans. If frequent intercourse were to favor a male conceptus, however, we would certainly expect to find a higher percentage of males among first- and second-born babies, for the frequency of intercourse is usually greater in the first years of marriage. Studies in humans have usually been extrapolated from animal data and are not yet statistically significant.

Next Tribune Consultant

DR. SAMUEL J. FOMON, Professor of Pediatrics, University of Iowa University Hospitals, Iowa City.

...and some questions he will answer:

- What is your attitude toward breast feeding?
- Which infant feeding practices are likely to have later consequences?
- Should formula-fed infants receive iron-fortified formulas?

Whole-Family Psychiatric Therapy May Result in Substantial Benefit

Medical Tribune World Service

HALIFAX, N.S.—Admission of entire families to the psychiatric unit of a Canadian general hospital resulted in functional improvement in most families, no matter which member was the object of primary care.

The Canadian Psychiatric Association was told here that in a four-year study, objections by both patients and hospital staff were fewer than expected and that the staff considered there was a moderate to high degree of benefit to 80 per cent of the families treated.

"But the lady at the admitting desk must be gently coaxed through her shock when it is suggested that she assign a male and a female to the same room," Dr. George Molnar, chief resident in psychiatry at the clinical teaching unit of McMaster University, Hamilton, Ont., told the association's annual meeting here.

Dr. Molnar was coauthor of the study with Dr. Norman F. White, Assistant Professor of Psychiatry at the university.

The rationale for family admissions, Dr. Molnar said, was that admission of only the patient alone too often interfered with both assessment and treatment. With familiar family surroundings lacking, the patient did not behave in the way he did when his psychiatric problem originally arose.

Inferences Called Speculative

"Conclusions about the meaning of behavior, and about its origins, were based on observations in a false environment or on psychohistorical data collected through a screen of defences and extraneous events," Dr. Molnar said. "Our inferences about interpersonal relations in the patient's native habitat were more speculative than informed."

Group, family, and individual therapy techniques were used in the study, with the family groups included with inpatients, day patients, and outpatients, Dr. Molnar said. Most common problems that required hospitalization of one family member were difficulty in child caring, general inability to function, risk of self-destruction, and marital breakdown. Seventeen of the mothers in the study suffered from postpartum disorders, with disorganized psychotic behavior and/or inability to care for their babies.

Both patients and staff at the hospital generally welcomed the presence of family units as a welcome change from the polished dreariness of hospital life, Dr. Molnar said. In families where the father was not the labeled patient, he often went to work as usual during the day, using the hospital as a home base.

Of 15 families that responded to an opinion poll up to three years after discharge, all but two thought the experience had resulted in improved family function. Most noted, however, that they had some difficulty in explaining the situation to

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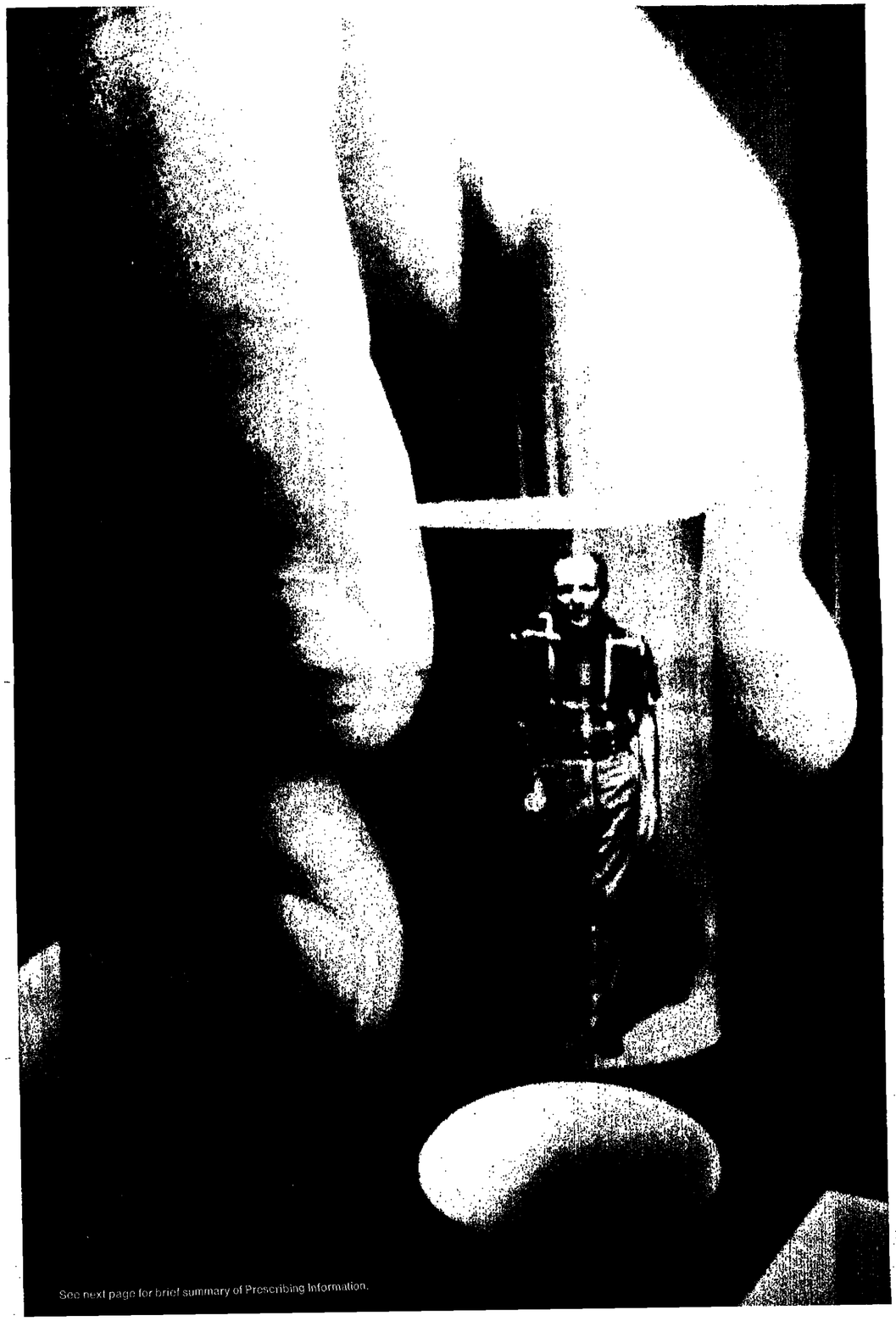

See next page for brief summary of Prescribing Information.

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Good—and Outstanding

The Food and Drug Administration is fortunate to be headed by a commissioner who is a physician and an administrator and who excels at both disciplines. Since taking command, Dr. Charles C. Edwards has had the herculean task of reorganizing and restructuring the FDA and of recruiting scientific and technical manpower for it. Along with this major chore, he has simultaneously had to confront sticky problems and make decisions in the area of public health while under fire from contending vested interests and while constantly reporting to Congressional committees. All this, in addition to the almost impossible task of the FDA's day-to-day regulatory activities.

Although Medical Tribune has often taken issue with FDA decisions, it has done so with admiring respect for Commissioner Edwards' achievements, his surgical coolness under stress, and his round-the-clock dedication to his responsibilities.

In a recent speech at the Symposium on National Policy and the Life Sciences, held at Woods Hole, Mass., Dr. Edwards emphasized that public interest and sophistication in scientific matters must be encouraged by the scientific community, which must see to it that this interest "is predicated upon and nourished by scientific fact and not emotionalism." Dr. Edwards posed a number of fundamental questions that confront the FDA and that are of great importance to physicians, to patients, and to the public weal in general.

He asked: (1) "How do we get across to the public and to our public critics the double face of our responsibilities—the positive responsibility to regulate good products onto the market as well as the negative responsibility to regulate bad products off the market?" (2) "Where do we draw the line in demanding scientific proof of safety and efficacy of existing products in order to be certain we are protecting the public and yet not stifling research to discover still more beneficial cures?" (3) "How do we deal with the constant problem of having to make regulatory decisions in the face of incomplete and inconclusive scientific knowledge?" (4) "Finally, in the face of doubt and skepticism, how do we in government, in the scientific community, and industry restore public confidence in our decision making?"

This last crucial question calls for understanding and participation on the part of all responsible for the care of the sick and the preservation of health. From a long view, "public confidence in . . . decision making" will evolve out of hard decisions that may be unpopular with industry as well as with consumer lobbyists—hard decisions based on the perspectives of medicine and science that may be unpopular with legislators as well as with the lay press. Scientific perspective, the traditional procedures, and the forums of medicine are not easy to maintain in the face of hysterical headlines, but they must be if progress in medicine is to be preserved within the context of scientific freedom as well as responsibility.

Dr. Edwards has been a good, indeed an outstanding, commissioner. If he successfully provides the answers to the questions he posed, he may well be a great one.

Saving Lives or Saving Lockheed

When it comes to appropriating money in these difficult days, one is baffled by the order of our governmental priorities. Appropriations for research have been reduced, medical schools by the score are at the brink of disaster, the physical plants of thousands of our hospitals are a disgrace.

What should take priority—saving Lockheed or saving lives?

VD

Prospects for the availability of vaccines against syphilis and gonorrhea in the immediate future do not seem bright if judged by the latest news of a workshop session at the International Congress of Immunology (see page 1). Meanwhile, the chances for stemming an ever-widening incidence of venereal disease in this country depends on reporting patients and thus helping case finding.

Antimicrobial Substances in Skin?

Clinical Quote: "We interpret the data presented here as possible substantiation of the role of antimicrobial substances on skin in the destruction of certain pathogenic microorganisms. The disappearance of Str. pyogenes and Staph. aureus in moist environments (with an occlusive device) suggests that these organisms are sensitive to the presence of antimicrobial substances due to some chemical mechanism. It was shown that when the forearm was wiped with acetone, the destruction of Staph. aureus, Str. pyogenes, and C. albicans was significantly reduced." (Raza Aly, Ph.D., and Drs. H. I. Maibach, H. R. Shinefield, and W. G. Strauss, at the Society for Investigative Dermatology meeting in Boston; see page 6.)

"Well it's finally happened, doctor—you're booked up for the rest of your life."

Rural Doctor Shortage

Editor, Medical Tribune:

Everyone admits that the doctor shortage in rural areas is acute, but no one—well, hardly anyone—seems to be doing anything practical about it. It seems to me the following plan is worth while, for various reasons.

Every resident physician should be required, as part of his training, to spend one month (or preferably six weeks) in at least one of his residency years with a rural practitioner.

The advantages are, I believe, evident:
1. The resident would learn the practical as well as scientific aspect of actual practice in office, home, or small community hospital, as compared with the ivory-tower atmosphere and methods of the medical center. He could learn to depend less on many expensive, time-consuming, and unnecessary procedures he has learned in the hospital.
2. The rural physician would learn from the resident many of the worth-while advances in medicine he has not had the time to observe firsthand.
3. The resident would be paid for his "locum tenens" or associate status in addition to his regular salary.
4. The rural physician would be freed to take time off for postgraduate study and/or vacation.
5 (and this may be the most important). The resident on loan would, there is good reason to hope, become sufficiently interested in rural practice and its many rewards to decide to settle in the same or similar rural community on finishing his training, as opposed to the present trend toward overspecialization and/or a life of often unrewarding research.

Harold J. Harris, M.D.
Westport, N.Y.

■

'Occupational Hazard'

Editor, Medical Tribune:

As a doctor's wife, I have become aware of an "occupational hazard" with which you may also be confronted. Unsolicited drugs are constantly sent to my husband through the mail by drug companies. These are left in our mailbox (on the street away from the house) or at his office. Anyone is able to pick up the package from our mailbox. We all know the problems and prevalence of drug addiction in our own areas, and there is no control over who gets these packages.

Most of these unsolicited drugs are never prescribed by my husband, which causes us a problem of disposal. If we toss them in the wastebasket, they may be retrieved by our children or someone else. If we carefully unwrap each capsule and flush it into the sewage system, we risk pollution of our waters.

There is a solution. As each package arrives, write on the front of it: "Refused. Return to sender." You need not add postage; it will be paid by the drug company. Then, write a simple note on your own stationery to that same return address: "I do not approve of sending drugs through the mail. Please remove my name from your mailing list. Drugs sent to me in the future will be returned unopened. Thank you."

Obviously, I feel that this is an important situation for doctors to consider. If you agree, please take a few minutes each month to help solve the problem. I have. I care.

Constance Eby Burns
Palos Verdes Peninsula, Calif.

■

'Last-Ditch Fight'

Editor, Medical Tribune:

The medical profession is now facing an absolute "last-ditch" fight against socialized medicine. It is obvious that immediate and drastic action must be taken. I am proposing such action, to which I have given much thought and have received much verbal support from many persons, not only physicians.

The great majority of our lawmakers in Washington are lawyers by profession and are well aware that when they retire or fail to be re-elected, they usually have a lucrative private law practice waiting for them. If they could be influenced to give some thought to their personal futures, I believe the great majority, regardless of political party, would quickly reconsider any further efforts toward socialized medicine.

Specifically, what I am proposing is an all-out "grass-roots" demand for socialized law.

The great majority of voters, sometime in their lives, have needed to employ the services of a good private attorney and found their fees rather high for services rendered. In fact, to the lower income brackets, with whom I've had close professional relations as a psychiatrist, truly good legal services are unobtainable due to high fees.

Personally, I am opposed to socialism in general, but I do believe that if the fear of socialized law could be dramatically presented to our lawmakers, we would not hear too much more about socialized medicine from them. Sometimes in our lives we must fight "fire with fire." At least it is worth some considered thought and action in this fight against socialized medicine.

Harry M. Ricketts, Jr., M.D.
Dallas, Tex.

Two-year-old patient places blocks using prosthesis under aid of occupational therapist Joanne Sesang. Dr. Ames observes. Right, physical therapist Carol Wildsmith helps triple amputee.

Medical Tribune Photos—Jane Huggins

Early Prostheses Fittings Found to Ease Adaptation

CONGENITAL AMPUTEES, some as young as three months, are fitted with prostheses in a rehabilitative program at the Children's Hospital of Philadelphia. Working with very young patients facilitates adaptation to the limbs and lessens the chances of later rejection, stresses Dr. Mary Ames, pediatrician and coordinator of rehabilitative services. A result is that the staff must occasionally improvise. Thus skates were provided to one 14-month-old with artificial legs who could not handle crutches easily. The progress of each of the 18 participants is evaluated at a monthly meeting.

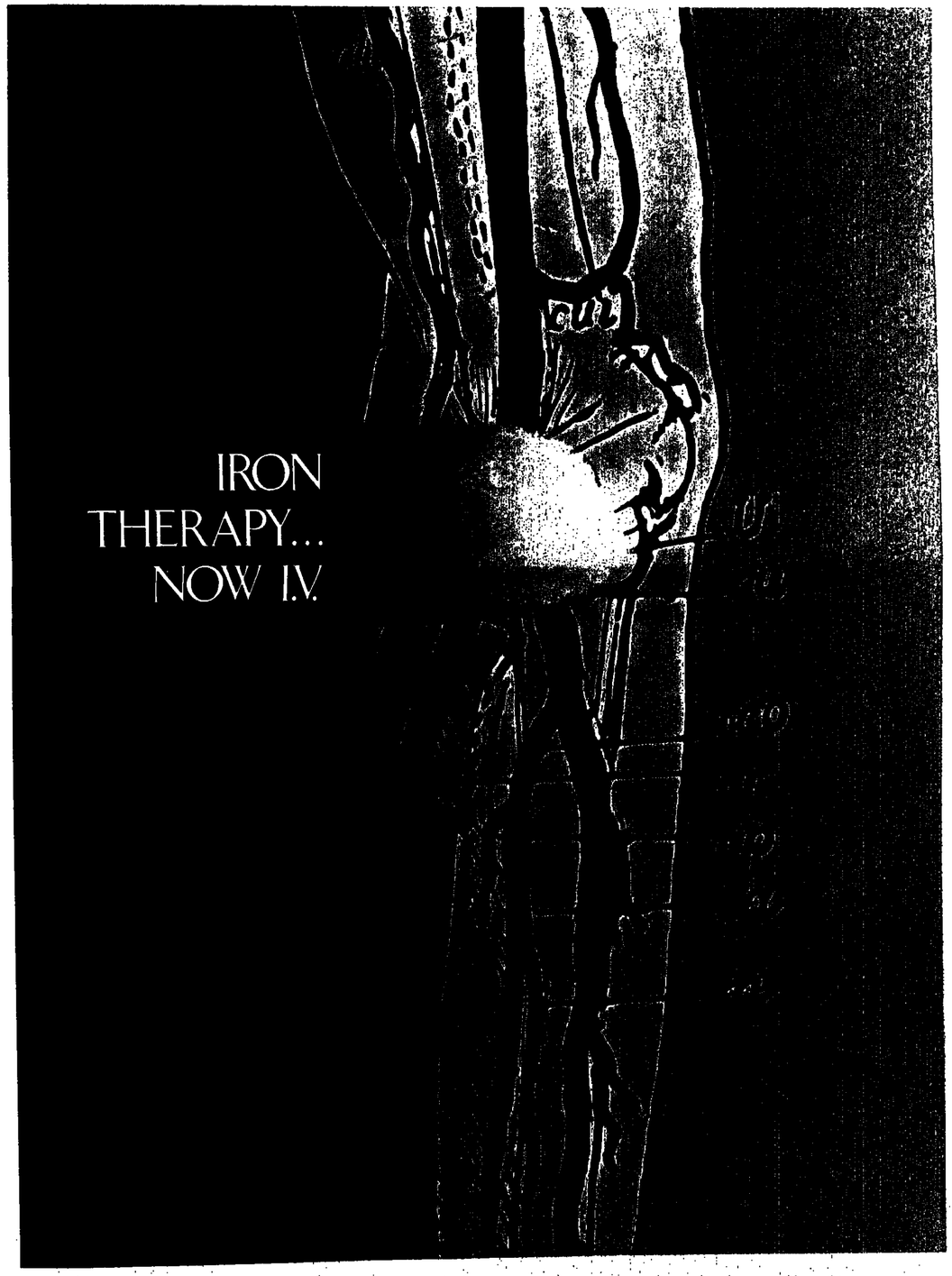
Prosthetist Ronald Parmelee measures one-year-old child for an artificial limb. Unlike previous limb, new one will have a control cable, as infant's muscles are developing.

Affair of the heart: Train and fire engine rides, "pond" fishing, and ring tossing delighted 65 former heart surgery patients, aged two to 14, and families at the first Medical University of South Carolina picnic-reunion. Dr. Arno R. Hohn, Professor of Pediatric Cardiology and director of the division, launched the idea for the event; the pediatrics personnel supplied the manpower. Left, Dr. Hohn with former patient. Above, one of several clowns at gathering tries to coax a smile from girl.

Missing lin
lab animals will be h
School of Medicin
Thomas Clarkson, D

Medical Tribune

Section II • Advertisement



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1. Council on Foods and Nutrition: Iron Deficiency in the United States, JAMA **203**:407-412 (Feb. 5) 1968.

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- intolerance to oral preparations;
- resistance to oral iron therapy;
- rapid replenishment of iron stores in selected patients in whom oral therapy is ineffective, such as
  hypochromic anemia of infancy and
  hypochromic anemia of the last trimester of pregnancy;
- selected hemorrhagic cases (appropriate steps should be taken to correct and prevent any excessive blood loss that may have been revealed as an etiologic factor);
- to replace postoperative transfusions to some degree;
- in those patients who cannot be relied upon to take oral medication.

IMFERON injected intramuscularly is the preferred and recommended route of administration. Intravenous use of IMFERON should be limited to the following circumstances:

a. Insufficient muscle mass for deep intramuscular injection

b. Impaired absorption from the muscle due to stasis or edema

c. The possibility of uncontrolled intramuscular bleeding due to trauma as may occur in hemophilia

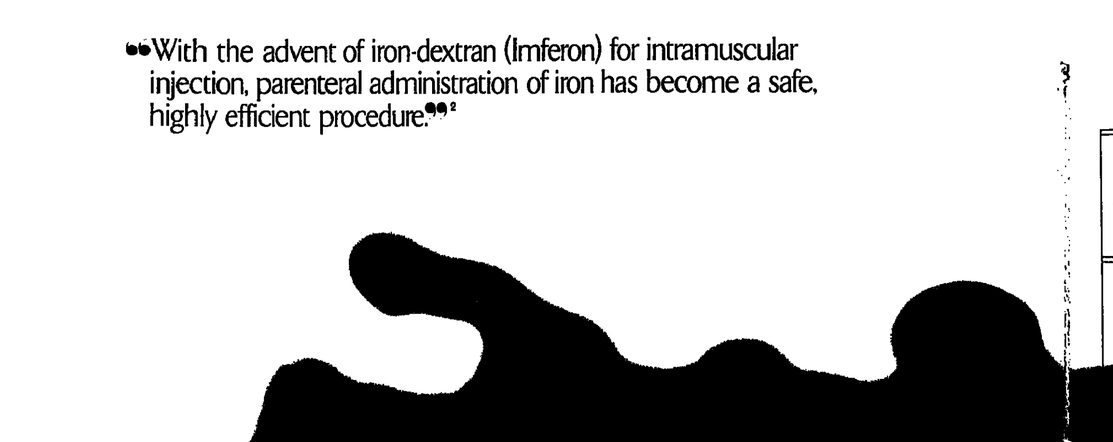
d. Where massive and prolonged parenteral therapy is indicated as may be necessary in instances of chronic substantial blood loss, such as familial telangiectasia

e. In those circumstances where, in the opinion of the physician, the benefit of intravenous administration substantially outweighs the risk.

See back page for complete prescribing information.

"With the advent of iron-dextran (Imferon) for intramuscular injection, parenteral administration of iron has become a safe, highly efficient procedure."[1,2]

some conditio
iron deficienc
anem



epistaxis | menorrhagia | multiple pregnancies | peptic ulcer | regional ileitis

The availability scale represents relative values, showing percentages of iron available for iron as hemoglobin and as body stores. Less than 1% of iron given as Imferon is excreted in urine. In certain cases, iron deficiency may be associated with chronic inflammatory states; in these cases, the ability of the R.E.S. and bone marrow to utilize iron—even to repair a considerable degree of anemia—may be limited.

2. Modell, W.: Design for the Use of Drugs in Hematologic Disorders. *Drugs of Choice 1970-71*, pg. 890.

IRON FROM VARIOUS SOURCES

Source	IRON ABSORBED (%)* Normals	Iron deficient Adults
IMFERON® I.V.	up to 99	up to 99
Veal Muscle	20.2	27.1
Lettuce, Spinach	3	9
Liver	8	22
Hemoglobin (raw)	10	22
Hemoglobin (cooked)	7	12
Ferrous sulfate	8.2-12	20

*Based on relatively equal amounts of iron consumed.

Typical case histories I.M./I.V. excellent clinical response

Age	Sex	Diagnosis	Hemoglobin before Imferon	Hemoglobin after Imferon	Route of administration
18	F	[illegible]cer[1]	7.3 Gm./%*	10.5 Gm./%—4 weeks 11.2 Gm./%—9 weeks 13.4 Gm./%—12 weeks	I.M.
		[illegible]hitis, [illegible]	[illegible]	[illegible] weeks	I.M.
					I.M.
				[illegible]ks	I.V.
				[illegible]Gm./%—4 weeks [illegible]/%—8 weeks	I.V.
78		[illegible]ulitis	4.5 Gm./%	8.3 Gm./%—4 weeks 10.3 Gm./%—7 weeks	I.V.
17	F	Postpartum bleeding, acute infectious mononucleosis[4]	7.4 Gm./%	12.3 Gm./%—5 weeks	I.V.

* Using 14.0 Gm./% as base.

1. Baird, I. M., and Podmore, D. A.: *Lancet* (1962), 1964.
2. Grunberg, A., and Blair, J.: *Ann. Int. Med.* 59:791, 1963.
3. Hayden, A. R.: *Proc. Staff Meet. Mayo Clin.* 32:709, 1957.
4. Caselles, Department of Clinical Research, Laboratories, Investigator: West, W. O.: Lexington, Kentucky.

now Imferon for I.V. administration...with almost complete iron availability

IMFERON® I.M./I.V.
(iron dextran injection)

See back page for complete prescribing information.

AN IRON FOR ALL AGES
(a dosage for all sizes)

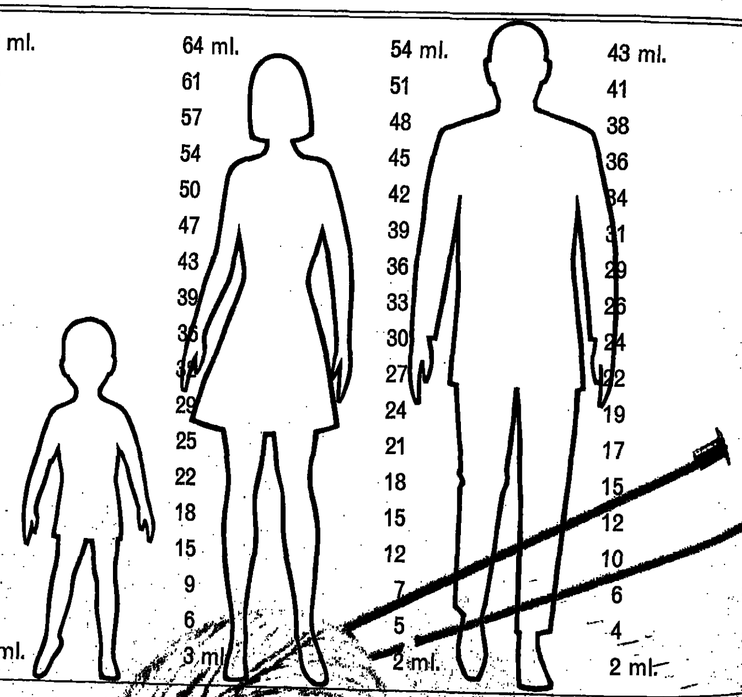
TABLE: TOTAL NUMBER OF ml. OF IMFERON (Iron dextran injection) REQUIRED IN A COURSE OF TREATMENT

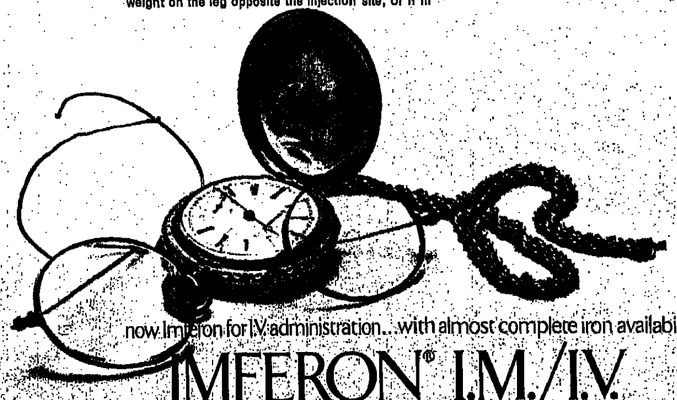
Patient's Weight in Pounds	Observed Hemoglobin 30% (4.4 Gm./100 ml.)	40% (5.9 Gm./100 ml.)	50% (7.4 Gm./100 ml.)	60% (8.9 Gm./100 ml.)	70% (10.4 Gm./100 ml.)
180	76 ml.	64 ml.	54 ml.	43 ml.	32 ml.
170	72	61	51	41	31
160	68	57	48	38	29
150	63	54	45	36	27
140	59	50	42	34	25
130	55	47	39	31	23
120	51	43	36	29	22
110	46	39	33	26	20
100	42	36	30	24	18
90	38	32	27	22	16
80	34	29	24	19	15
70	30	25	21	17	13
60	25	22	18	15	11
50	21	18	15	12	9
40	17	15	12	10	7
30	10	9	7	6	5
20	7	6	5	4	3
10	4 ml.	3 ml.	2 ml.	2 ml.	2 ml.

The total cumulative amount required to restore hemoglobin and replenish iron stores may be approximated from the formula:

0.3 × body weight in pounds × (100 − patient's hemoglobin in grams percent × 100 / 14.8) = milligrams total iron to be injected.

(to calculate dose in ml. of Imferon, divide this result by 50)





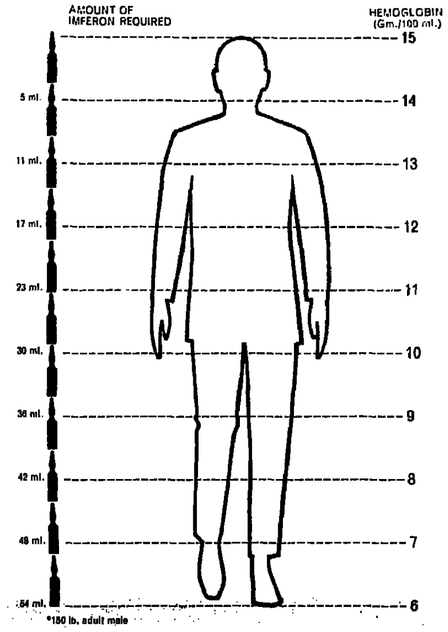
now Imferon for I.V. administration... with almost complete iron availability

IMFERON® I.M./I.V.
(iron dextran injection)

See back page for complete prescribing information

for example...

the amount of Imferon required to raise an average adult's* hemoglobin to 15 Gm./%, and replenish iron stores, would be as follows:



*150 lb. adult male

NOTE:

DOSAGE FOR INTRAMUSCULAR USE: The total amount of IMFERON (iron dextran injection) required is calculated from the formula or table (see preceding table). *Inject a test dose of 0.5 ml. the first day. If no* indications of adverse reactions are apparent, proceed to administer IMFERON according to the following schedule until the calculated total amount required has been reached. Each day's dose should ordinarily not exceed 0.5 ml. (25 mg. of iron) for infants under 10 lbs., 1.0 ml. (50 mg. of iron) for children under 20 lbs., 2.0 ml. (100 mg. of iron) for patients under 110 lbs., and 5 ml. (250 mg. of iron) for others.

Inject only into the upper outer quadrant of the buttock—never into the arm or other exposed area. Inject deeply, with a two- or three-inch 19 or 20 gauge needle. If the patient is standing, he should be bearing his weight on the leg opposite the injection site, or if in bed, he should be in the lateral position with injection site uppermost. To avoid injection or leakage into the subcutaneous tissue, a Z-track technique (displacement of the skin laterally prior to injection) is recommended.

DOSAGE FOR INTRAVENOUS USE: The total amount of IMFERON (iron dextran injection) required is calculated from the formula or table (see preceding table). This is given in a dose of 0.5 ml. the first day to test for and minimize the chance of toxic reactions. Within two or three days the dosage may be raised to 2 ml. per day, and given thus until the calculated total amount required has been reached. The IMFERON is given undiluted, and slowly (one minute per ml. or fraction thereof).

Plain skull film, left, of patient with cerebral paragonimiasis. Numerous multiple congregated round or oval cystic calcifications throughout right temporooccipital area are shown. Above, lateral view of same patient. Eating raw or improperly cooked host crab or crawfish causes human infection.

Cerebral Infestation By Lung Fluke Studied

A COMMON NEUROSURGICAL PROBLEM in Korea, Japan, Taiwan, and the Philippines is cerebral infestation by the lung fluke, Paragonimus westermani. Ten patients were examined by Drs. Hisashi Morioka, Hideo Aoki, Kenichiro Higashi, Kinichiro Tatebayashi, and Yozo Sakata, of Yamaguchi University Medical School, Ube, Japan.

Initial neurologic symptom usually was an epileptic fit. Homonymous hemianopia was found in 80 per cent of cases. Though a majority had a vestige of pulmonary infection demonstrable in chest films, there was an active pulmonary lesion in only one case. Characteristic x-ray finding was intracranial calcification. Pneumography indicated ventricular filling, deformity, and enlargement. Skin screening test for parasite showed positive intracutaneous reaction in all five patients tested.

DR. MORIOKA

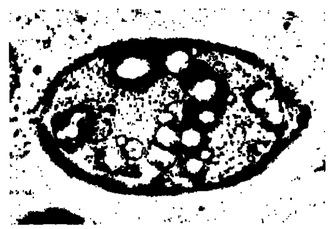
DR. AOKI

DR. HIGASHI

DR. TATEBAYASHI

Cystoid tumor. A large number of Paragonimus ova can be seen in cystic cavity under capsule. Disease is also found in South America, Africa.

Opening of dura, above, in another patient reveals entire right occipital lobe to be completely replaced by a conglomeration of numerous granulomatous and cystoid lesions. Left, the removed tumor from right occipital lobe. Gliosis tissue connects the granulomatous with the cystoid lesions.

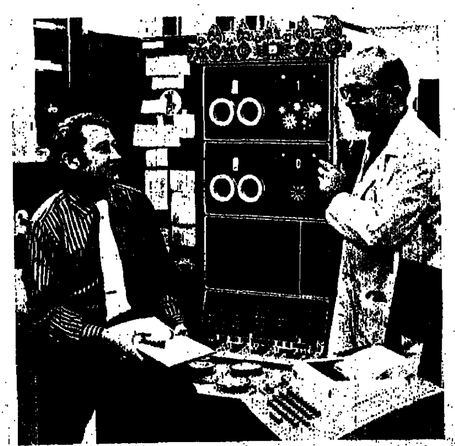


Ovum of the parasite as seen in smear preparation of pustlike substance within the cystic cavity.

DR. SAKATA

...S: Nutritional and genetic studies on arteriosclerosis included in new specialized research center at Bowman Gray School. It was established by five-year NHLI grant. Director Walter M. (l.), and Hugh Lofland, Ph.D., check squirrel monkeys.

Making history: A computerized questionnaire for recording medical histories has been formulated by a team headed by W. E. Hammond, Ph.D., biomedical engineer (l.), and Dr. H. K. Thompson, Jr., biomathematician, at Duke University Medical Center. The culmination of six years' research, it is 19 pages long and takes an average of 45 minutes to complete. There are 800 possible responses, but most patients will be required to answer only 200-250. The printout organizes data under general history, family medical history, and review of systems.



'A Lot More Work' Necessary Before Human VD Vaccine Use

Continued from page 1

able to human beings, we're going to have to ensure its purity from rabbit tissue contamination."

That last matter is of considerable concern because rabbit testicular debris in a vaccine for human beings poses possibilities of unwanted immunologic events, even including the risk of engendering a man's antibodies to his own testes.

Some other troublesome aspects of syphilis vaccine in the current state of development include the vaccine's conferring a reaction to the serologic tests now used to detect the disease. Depending on the route of vaccine administration, rabbits have turned up positive to some or all of the antibody tests now commonly used—reactions that have been found to linger as long as a year.

Also there is "no convincing evidence," Dr. Miller said, to show whether syphilis immunity is a mechanism of the humoral system or the cell-mediated system. There are some implications supporting cellular immunity, but nothing that could be considered unequivocal.

Syphilis vaccine experimental successes have been reported at least as long ago as 1967, by Dr. John M. Knox, of Baylor University, and more recently by Dr. Miller and Dr. Mieczyslaw Metzger, of the Polish Academy of Science in Wroclaw.

Gonorrhea Incidence Climbing; No Reliable Serologic Test

From CDC, Atlanta, Ga.

► The investigation situation in gonorrhea is only slightly brighter, said the other cochairman of the workshop here, Dr. Leslie C. Norins, of the Center for Disease Control in Atlanta, Ga.

While the estimated U.S. incidence of gonorrhea is climbing to 2,000,000 cases a year (as compared with 600,000 reported, which is a 15 per cent rise over the preceding year), there still is no reliable serologic test for the disease as there is for syphilis.

A variety of existing serologic tests suffer from the use of "crude antigens," Dr. Norins said, and the most sensitive tests also incur the highest incidence of false positives—up to 20 per cent.

Neisseria gonorrheae is known to share antigens with other, apparently harmless Neisseria species and probably with other gram-negative bacteria and even with Escherichia coli, he said, making "the problem of apparent false-positive reaction one of the most vexing at this time."

One possibility for sharpening both diagnostic and therapeutic procedures against N. gonorrheae is raised in the electron-micrographic work of Danish investigators who have found apparent structural differences between colonies of the organism that are virulent and colonies that are not.

Dr. Alice Reyn, of the State Serum Institute in Copenhagen, told the workshop that the virulent types are accompanied by bundles of fibrils that are not seen in the field of view with nonvirulent types. Although no indisputable connection between the fibrils and the cell wall has been established, she reported, "we still feel that the fibrils most closely resemble the fimbriae (or pili) of gram-negative rods . . . [and] it is possible that the fibrils may play some part in the virulence of the gonococcus."

DR. NORINS

Coinvestigators inclued Dr. A. E. Jephcott, now at the Public Health Laboratory, Sheffield, England.

Natural immunologic response by circulating antibodies to gonorrhea infection is well recognized, Dr. Norins said, but the defense mechanism has recently been found to go beyond that. CDC investigators have identified secretory IgA antibody to gonorrhea in vaginal washings of infected subjects. And preliminary experiments indicate secretory IgA is in the urethral secretion of males with gonorrhea.

In each instance, as the mechanism of secretory antibody is understood now, that immune mechanism is independent of circulating antibody production and thus offers another possibility for enhancement of natural defenses.

While all the recent findings about gonococcal antigen and immune responses conceivably could aid the development of a vaccine against gonorrhea, Dr. Norins said, the only known approximation to a vaccine is a gonococcal autolysate prepared by investigators in Ottawa. Injected into volunteers, it stimulated a serum antibody response, but a booster dose a year later did not elicit a booster response, possibly because of antigenic fading during the year's storage.

For gonorrhea researchers, the handicap of lacking an animal model of the disease may be easing with the recent accomplishment at CDC of infecting chimpanzees (MEDICAL TRIBUNE, July 7). Urethral exudates of male patients were inoculated into the urethra of male chimps, who then infected female chimps in the customary way. The female chimp infection, asymptomatic as in many women, appears to be self-limited and subsides after about eight weeks, Dr. Norins said.

Radiologist Appointed

University of Chicago has appointed Dr. Alexander Gottschalk as chairman of the Department of Radiology at the Pritzker School of Medicine. He has been on the faculty since 1964.

Detoxifying Study May Aid War on Pollution

Continued from page 1

natural toxicants have coexisted for eons of time. We could benefit by capitalizing on knowledge of the means by which organisms adapt to and detoxify these substances. This same general type of approach has been used to control polio, tetanus, and other infectious diseases. The etiologic agents still exist, but specific parts of the detoxication system have been reinforced sufficiently to deal with exposures. This approach, which has been so successful in microbiology, just might be helpful in toxicology."

As an example of such an approach, the investigator described an experiment in which ingestion of phenobarbital decreased toxicity from lead. The physical appearance of lead-fed rats was improved, impairment of body weight gain was virtually eliminated, and storage of lead in liver tissue was decreased 39 per cent by phenobarbital, he said.

Proof of Iodine Lack Needed Before Supplementing Diet

From NIAMD

► There is no justification for recommending iodine supplementation to any U.S. population group unless it can be shown by appropriate clinical and field studies that iodine deficiency exists, the meeting was told by Dr. Robert L. Vought, chief of the Metabolic Diseases Epidemiology Unit, Epidemiology and Field Studies Branch, National Institute of Arthritis and Metabolic Diseases.

Recently collected data strongly suggest that we have an iodine "surfeit" in this country, he said. Probably because of heavy consumption of dairy and vegetable products, iodine intake from food alone is entirely adequate for most of our population, he added.

The average daily consumption of milk and fresh leafy vegetables alone contains 116 micrograms of iodine, or more than the 100 micrograms deemed sufficient by the National Research Council, Dr. Vought said, and over-all intake of iodine is from two to seven times the minimum.

"Unfortunately, the quantity of excess iodide needed to induce mild hypothyroidism is not known, and there is undoubtedly much variation in amounts between individuals," Dr. Vought remarked, adding that "this is an area that deserves research attention."

Effects of Intensive Exposure To Pesticides Measured

From Medical University of S.C.

► Blood pressure, plasma cholesterol, and total lipids were significantly elevated in subjects intensively exposed to pesticides, compared with nonexposed matched controls, according to Dr. Samuel H. Sandifer and Julian E. Keil, of the Medical University of South Carolina.

The comparison was made between 30 volunteer pesticide workers who had intensive mixed exposure to chlorinated hydrocarbons, organophosphates, carbamate, and other pesticides and 30 controls who were individually matched to the volunteers by age, race, sex, and physical activity.

There were a significantly greater number of pesticide-exposed subjects than controls with abnormal systolic pressure, diastolic pressure, and overt hypertension, the investigators said. Further breakdown of the data showed abnormalities clustered in the nonwhite exposed subjects.

Significant associations were found between systolic pressure, diastolic pressure, weight, and plasma DDT concentration.

While the data suggest an association between hypertension and pesticides, the nature and significance of the association are not clear, the authors said.

Bone Fracture Healing Improves With Zinc Diet Supplement

From University of Detroit

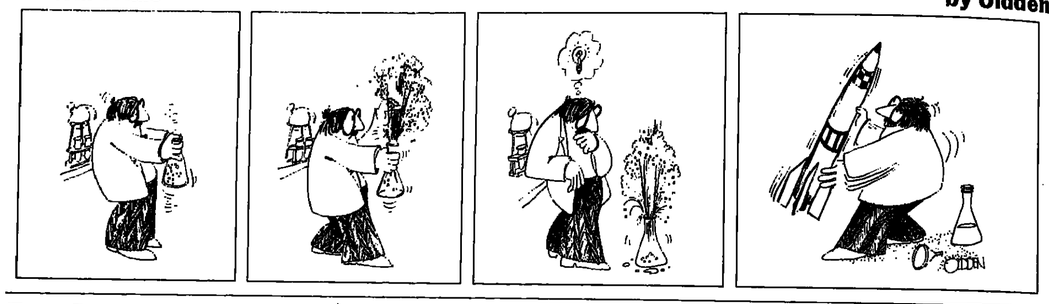
► Dietary zinc supplementation resulted in improvement in the early stages of bone fracture healing in animal studies, according to Armen Z. Mesrobian, of the University of Detroit School of Dentistry.

Fractures of the mandible were produced in a group of hamsters, and half the animals received a 1.32-mg. dietary supplement of zinc sulfate daily, he said. At four days after fracture, both groups of animals showed hemorrhage and connective tissue–healing activity, but zinc-supplemented animals had more osteoid formation.

At seven days, all the animals had well-defined connective tissue calluses, but only the supplemented animals had developed osteoid bridges uniting fractured bone trabeculae, the investigator said.

Clinical Trials

by Oldden



Zero Population Growth Believed Possible in U.S. by 1980

Medical Tribune Report

SAN FRANCISCO—The United States could reach a condition of zero population growth as early as 1980, according to Donald J. Bogue, Ph.D., Professor of Sociology and director of the Community and Family Study Center at the University of Chicago.

If this condition is not attained by 1980, it will be achieved well before the year 2000, he predicted. In 2001, the same number of births will occur as in the current year.

"In fact, white Anglo-Saxon Protestant and Jewish-American populations are already reproducing at or below the zero growth level," Dr. Bogue told a meeting of the American College of Obstetricians and Gynecologists. Most of the country's recent slackened growth is the result of declining birth rates in minority groups whose birth rates are moderately above average, such as blacks, Spanish-speaking Americans, and Roman Catholics, he said.

Dr. Bogue attributed the decline in birth rates to:

- Expanding knowledge of contraception. "A very substantial percentage of pregnancies are still 'accidental' and undesired at the moment they occur—especially first pregnancies and pregnancies after the third child," he said. "Knowledge of contraception and access to contraceptive devices will decrease such pregnancies."
- A rise in the average age of marriage. "Older age at first marriage is linked to lower total fertility," Bogue states.
- Rapidly declining fertility of the remnants of the "high fertility culture."
- Discovery and mass availability of new and even more effective and easy-to-use methods of preventing childbirth.
- The women's liberation movement. "That working women have fewer children is widely documented. The movement will lower fertility."

Data on Cholera Used in Treating Infants' Diarrhea

Medical Tribune Report

BETHESDA, MD.—Experience gathered from epidemics of Asiatic cholera is being applied to treatment and prevention of acute diarrhea of certain American Indian infants, according to Dr. G. Donald Whedon, director of the National Institute of Arthritis and Metabolic Diseases (NIAMD).

Scientists of this institute have begun the Indian study in collaboration with colleagues from the Johns Hopkins University School of Medicine, under an NIAMD contract with the University.

Outpost Is on Reservation

The team of researchers has established an outpost on the Apache Indian reservation about 150 miles northeast of Phoenix, Ariz., at the Indian Health Service's Whiteriver Hospital. The scientists and their families are living in trailer homes as they begin their studies among Apache Indian babies.

The Apache children suffer annual severe epidemics of diarrhea, and the incidence has been over one case per child per year.

The death rate, formerly very high among children under five years of age, has dropped markedly, but the disease still hospitalizes infants for long periods and causes them a great deal of suffering. It is prevalent, though less serious, among many of the other Indian tribes of the Southwestern United States, where the NIAMD is currently conducting research on arthritis, diabetes, and gastrointestinal disorders.

Dr. Robert S. Gordon, Jr., NIAMD clinical director and project officer for the study, and Dr. Norbert Hirschhorn, Assistant Professor of Medicine at Johns Hopkins, both helped to control a cholera epidemic in Dacca, East Pakistan.

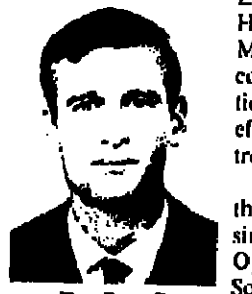
Chess Solution

White mates in four by 1 N-KN3 (threatening N-B5-K7-QB8) PxP; 2 K-Q7!!, PxN; 3 BxP, KxN; 4 B-B2.

Doctor in Malawi Cites 250 Cases Of Xerophthalmia

Medical Tribune World Service

TEL AVIV, ISRAEL.—About 250 children with active xerophthalmia and keratomalacia, nearly half of whom died, were seen during a three-year period by an Israeli doctor who spent three years as chief of 55-bed ophthalmologic ward at the Queen Elizabeth Central Hospital in Blantyre, Malawi. A covering corneal graft operation proved the most effective method of treatment.



DR. BEN-SIRA

Reporting this at the eighth symposium of the Israel Ophthalmological Society here, Dr. Itshek Ben-Sira, of the Hadassah Medical Center in Jerusalem, said the children were usually in the one-to-four age group and suffered from malnutrition, very often of kwashiorkor. The xerophthalmia and keratomalacia had been precipitated by measles, dysentery, bronchopneumonia, or chickenpox.

The children were brought to the hospital generally in an advanced stage of their disease. The cornea was either xerotic or in a state of liquefaction, often including perforation and iris prolapse. They were admitted to the pediatric department if their condition was grave, but many also received treatment in the ophthalmologic department. The patients were usually treated with antibiotics and vitamin A injection 100,000 I.U. for three days. In severe cases infusions were added. In spite of the treatment, 100 children died shortly after admission.

Graft Operation Performed

The condition of the others was too severe to perform a complicated operation, so it was decided to perform the covering graft operation. "This is a simple, very short operation and very effective," said Dr. Ben-Sira. The operation consists of cleaning the perforated corneal wound from the iris and covering it with 10.0 mm. full thickness of preserved cornea. The graft is secured by a few silk sutures far from the place of perforation. During the following month the graft seals the perforation and allows a scar to form over the perforation. The graft is removed after one month.

More than 50 such operations were performed during the three years Dr. Ben-Sira reported on, and in 45 of the eyes they were very successful. In some they resulted in small scars in front of the pupil, however, and an optical iridectomy or a real perforating graft had to be performed.

Dr. Ben-Sira said that during the three years he spent there, some 25,000 patients were received annually at the ophthalmologic outpatient department. Complicated or severe cases were admitted to the ward, the second biggest of its kind in Africa. The majority, however, were treated by local African medical assistants.

Dr. Ben-Sira and his predecessor as head of the ward, Dr. Uri Ticho, also of the Hadassah Medical Center, held training courses for the local staff, in which they were taught how to deal with the common eye diseases and to perform operations. Dr. Ticho spent 18 months at the hospital. Both doctors were sent to Africa by Prof. I. C. Michaelson, head of the department of ophthalmology at the Hadassah Medical Center, to help develop ophthalmologic services.

Immunology Training Set

FARMINGTON, CONN.—The University of Connecticut Health Center has received a $261,684 Federal grant to train immunologists. The grant, from the National Institute of Allergy and Infectious Diseases, will support training programs to be directed over the next five years by Dr. Elmer I. Becker, Professor of Pathology.

Find Sexual Pleasure Abetted In Only 39% of Group on 'Pill'

Medical Tribune World Service

HALIFAX, N.S.—In spite of assumptions to the contrary, libidinal interest and sexual pleasure increased in less than half of a group of women using oral contraceptives who were surveyed in a Canadian experiment.

"They felt unhappy, dejected, lost appetite, weight and sexual interest, cried a great deal, had self-accusatory ideas and in some cases suicidal ruminations," he told the Canadian Psychiatric Association.

Dr. Jean N. Fortin, Professor of Clinical Psychiatry at the University of Montreal, reported here that roughly 45 per cent of the women displayed depressive symptoms while on the contraceptives.

Other, less commonly reported, side effects included dizziness, headache, and breakthrough bleeding, Dr. Fortin said.

The study was carried out on 70 married women attending either private gynecologists or a community family-planning clinic in Montreal. Women with organic gynecologic illness or a history of psychiatric illness were excluded from the study. All subjects had had at least one pregnancy and had been taking oral contraceptives for at least three months.

Although some of the women had depressive states long before they started on "the pill," these states continued, improved, or became worse without any demonstrable connection with the medication.

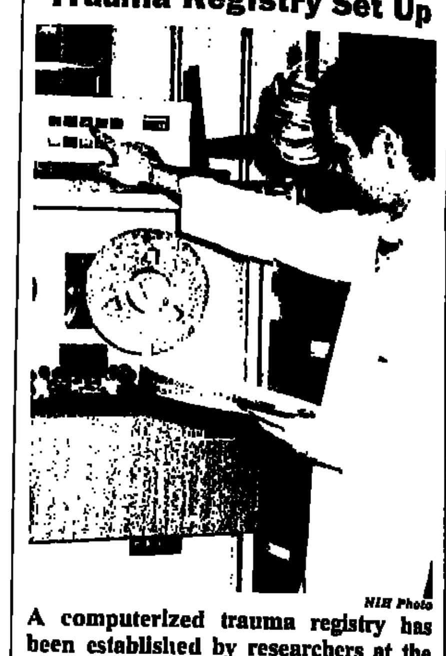
"But there remains another group of women whose depressive symptoms started shortly after being placed on the pill, continued during this medication, but lifted when the woman was taken off the pill and especially when she became pregnant," Dr. Fortin said.

While there is a possibility that these depressive spells are due to alteration in the hormonal system, a psychologic explanation can be offered, he added. Case histories show that the reaction occurs in women who were reluctantly forced by circumstances to take the pill.

In addition to 38.57 per cent who reported that their sexual appetite was improved, 28.57 per cent reported their libido decreased and 32.86 per cent reported no change.

Coauthors were Eric D. Wittkower, Jacqueline Paiment, and L. Tetreault.

Trauma Registry Set Up



NIH Photo

A computerized trauma registry has been established by researchers at the University of Illinois Medical Center, Chicago, to provide better emergency care for accident and shock victims. Hospitals in the network will be able to receive instant patient histories and clinical summaries for specific injuries. Its developer, Dr. David Boyd, checks a computer employed in the new system.

Teaching of Suicidology Is Tested With a Computerized Curriculum

Continued from page 1

data that emerged from these sessions was then digested by three sets of instruments developed for the purpose:

- Educational aims framework—a framework permitting a concise statement to be made regarding the purpose of the educational experiences for each target professional group.
- Master list of educational experience elements—this set of elements included an outline of the didactic subject material, the clinical experiences appropriate to the subject area, and such "simulated" experiences as films, tapes, plays, and so on.
- Computer algorithm—this was described by Dr. Murray as a "common sense" computer program that acted upon the set of aims stated to allocate a quota of student time to the educational experience elements.

Using these tools, the team then developed three syllabuses for each of 13 target professional groups. The syllabuses differed as to the number of hours devoted to studies of suicide and self-destructive behavior, rated as "minimum," "average," and "longer-than-average" programs.

The educational service system derived from all these steps, Dr. Resnik said, goes into action when an instructor who wishes to use it fills in a survey that tells what his educational aims are, the type of student, the classroom time available, the limitations (if any) he wishes to place on the use of special material, and the instructional mode—i.e., the theoretic orientation of the instructor himself.

Syllabus Is Generated

When these items of information are fed into the computer, a syllabus is generated that contains three items—a topical outline and approximate distribution of classroom time among topics, two sets of recommended references (one for students and one for the instructor) for each topic, and a recommended list of special materials, cross-referenced to the topics to which they relate.

In addition to these basic items, all of which are tailored to the instructor's stated needs, the package produced also contains a narrative description of the topics included in the topical outline, a bibliography extending beyond the references specifically recommended for the program, a description of each item of recommended special material, and an evaluation survey to be used by the instructor so that he may report any deficiencies discovered in the curriculum material during its use.

The investigators reported that the program was pilot-tested last year for a cross section of disciplines. The medical school programs tested were for undergraduate medical students, psychiatric and nonpsychiatric resident physicians (including family-practice residents), and continuing education for physicians. Other groups included in the pilot programs were undergraduate and graduate nurses, master's candidates in social work, graduate sociology students, pastoral counseling students in seminaries, and mental health technician trainees at community college courses.

Dr. Resnik told MEDICAL TRIBUNE that word of the pilot tests at the medical schools has spread and that a number of inquiries about the program have been received.

"We're now in the process of completing our 'package,' and we hope to have them available by next winter," he said.

For Measles Study

At Georgetown University Medical Center, Dr. Joseph Bellanti examines child recovering from measles. Lymphocytes from patient's blood will be used in studying body's delayed hypersensitivity response to viruses.

Late-Onset Diabetes: Study Group Urges More Stress on Diet

Medical Tribune Report

CHICAGO—Dietary control deserves a greater emphasis in the management of maturity-onset diabetes, a meeting of the American Geriatrics Society was told here by Dr. Thaddeus E. Prout, Associate Professor of Medicine at Johns Hopkins and coauthor of the University Group Diabetes Program study.

"The results from the U.G.D.P. have given little hope that the degenerative complications of diabetes are preventable by simple control of blood glucose," he asserted.

"In the maturity-onset diabetics, neither insulin nor oral hypoglycemic agents gave greater protection against these complications than diet alone. . . . Use of additional therapeutic agents must be justified by reasons other than those of the prevention or cardiovascular complications.

"When diet alone does not provide symptomatic relief—and, in the belief of the attending physician, a lowering of blood glucose is desirable—insulin is to be preferred over oral hypoglycemic agents because it is safer.

Overzealous Use Scored

"Overzealous use of insulin in order to maintain normal glycemia and aglycosuria may result in wide swings of blood glucose with repeated hypoglycemic attacks with their inherent dangers. Patients who have been vigorously indoctrinated in the need to prevent glycosuria are frequently difficult to convince that hypoglycemia is a greater danger than mild hyperglycemia....

"Oral agents may continue to fit a need under very special circumstances. They may be used as drugs of convenience in patients with diabetes of mild to moderate severity who prove to be poorly controlled with diet and who are unwilling or otherwise unable to administer insulin."

Dr. Prout remarked that "we have overworked blood glucose as a marker for this complex, multifaceted condition known as diabetes mellitus."

On the basis of available evidence, he said, we should probably conclude that elevations of blood glucose are a normal process of aging, that pathologic changes are already present at the time of diagnosis in patients with adult-onset diabetes, and that control of blood glucose by conventional standards does not give any measurable benefit as far as degenerative complications are concerned in patients with non-insulin-dependent adult-onset diabetes.

Training in Aging Funded

CORAL GABLES, FLA.—The University of Miami School of Medicine has received a five-year, $456,006 grant extension from HEW to continue a program of training scientists as researchers and teachers in aging.

World Registries Seen Key to Cancer Studies

Continued from page 1

still others by private individuals.

The registries cooperating with the agency include one in Ibadan, Nigeria; one at Hamburg, West Germany (an unusually old one—it started in 1927); and another in East Berlin. Others are in Gliwice, Poland; Cali, Colombia; Kingston, Jamaica; and Ljubljana, Yugoslavia. There are also registries in Hawaii, Sweden, Japan, India, Canada, and elsewhere. One of the best and oldest, dating from 1935, is run by the Health Department of the State of Connecticut, according to Dr. C. S. Muir, head of the department of epidemiology and biostatistics at IARC.

Good Registries in Scandinavia

"There are very good registries in the Scandinavian countries," Dr. Muir told MEDICAL TRIBUNE. "Each patient is given a number he's obliged to use, and that makes linkage easy. There are registries at El Paso, Tex., and at Alameda County, Calif., but there is trouble defining the populations at risk because people move around so much.

"There's a gap in South America, but we are supporting a registry now in Lima. In Alberta, Canada, the registry works well because the physician isn't paid for treatment he gives until he reports adequately on the case. There's a good registry in Uganda, because by a paradox it is sometimes easier to run a good registry in a place where there are few sources of care or only one. In Singapore, for instance, there is only one pathology institute and only one center for radiation therapy, so the sources of information are circumscribed."

DR. MUIR

The registries that are part of the agency's program cover 58 populations. Their reports, which constitute a basic guide to the geography of cancer, have been collected and printed, with the aid of a computer at Queen Elizabeth Hospital, Birmingham, England, in a publication entitled *Cancer Incidence in Five Continents—Volume II*. It is distributed for the International Union Against Cancer (generally referred to as the UICC, after its French name: Union Internationale Contre le Cancer) by Springer-Verlag of Berlin, Heidelberg, and New York.

"There are really three basic levels for information about cancer distribution," Dr. Muir said. "First, there are morbidity statistics. These come to the agency mostly from the cancer registries.

"Second, there are mortality statistics. These are less complete, and of course are slanted toward fatal cases. They don't give an accurate picture of the incidence of skin cancer, for example, because relatively few people die of skin cancer. They give quite an accurate picture of lung cancer incidence, since lung cancer usually kills the victim."

A third source of information, Dr. Muir said, are figures that come from pathology and radiation therapy departments without reference to a population. "For instance," he said, "in Thailand we don't know where the patients come from. Therefore, we prefer not to try to estimate a rate, but what we can do is get an idea of the relative importance of different types of cancer."

Patterns Appear in Figures

Some patterns that appear in the figures invite attention. "But," said Dr. Muir, "when we see an increase in a particular kind of cancer, we have to ask: is it a real increase, or are the doctors just getting better at diagnosis? And there are fashions in medicine, you know.

"Sometimes, however, the changes are obviously real. Take cancer of the testis in Denmark. Its incidence has doubled in 20 years in urban areas in Denmark. I can think of no improvement in diagnosis that could explain this. It is a real across-the-board increase. But in Finland, which is next door, there has been no such increase.

"This is exciting. We do not know why it is so. But Dr. Johannes Clemmesen, at the Danish Cancer Registry under the National Anticancer League, in Copenhagen, is working on the problem. He is trying to determine if there is some difference between the habits or the environment of urban Danes and urban Finns that can explain this difference."

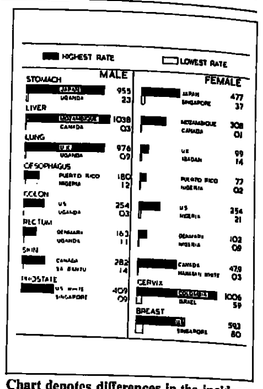


Chart denotes differences in the incidence of various cancers in selected regions. International Agency for Research on Cancer researchers say environmental agents influence disease's rate and character.

Lung Cancer High in Finland

Some years ago it was discovered that there was a much higher lung cancer rate in Finland than in Norway. By then the lung cancer–cigarette smoking relationship was quite well established. "But," said Dr. Albert Tuyns, of the agency's unit of epidemiology and biostatistics, "here were two groups of approximately the same kind of people, living in the same climate, yet Finland clearly had a higher lung cancer rate. We furthermore had the impression that the Norwegians smoked cigarettes about as much as the Finns."

"It turned out," Dr. Tuyns said, "that both populations were smoking a lot. But the Finns had been smoking cigarettes for 20 to 25 years. The Norwegians started many years later."

The Norwegians have not yet caught up. Their lung cancer rate among males 50 through 54 years old is 29.5 per 100,000, according to the latest available figures. Finland's rate is 134.4 per 100,000 for the comparable group. (The Norwegian rate derives from 1964-66; the Finnish rate derives from 1962-65.)

Visitors to the agency, hearing about studies of liver cancer in Africa, or an incidence difference between Hong Kong and Singapore, or the impact on health of cigar-smoking in Thailand, sometimes ask why such studies are so scattered.

"The fact is," said Dr. Muir, "that our only hope really to look into the world of cancer is to go to places where things have not become homogenized. In England and the United States, things are homogenized. Go into a supermarket or a dozen supermarkets and you see the same foods over and over again. People eat the same things. The differences that might cause or promote cancer are in a sense covered up.

"No, we must go where the figures call us. Sometimes we are told that what we are doing is not basic enough. But what is more basic than the human being if one is interested in human disease? Perhaps it is once again becoming fashionable to consider that the proper study of mankind is man."

The next issue of MEDICAL TRIBUNE *will continue this report on the International Agency for Research on Cancer.*

Red Cell Transfusions Cut Sicklemic Crisis Severity

Continued from page 1

apart, for a total of 20 ml./Kg. in the two-day period. The transfusions typically raised the blood hemoglobin level an average of 4 Gm.

"While on the program, children were physically stronger, kept up with social peers, and were less slow in school," the physician reported. "Growth usually was not stimulated. . . . Severe crises became minimal in number and severity; 14 children had one or a few brief attacks of pain.

"As controls, data from these children were tabulated for one year before they entered the program, during dropout periods, and for the first month after the program stopped. Among the 30 children with adequate control observations, *all* had many more mild, moderate, or severe crises."

Pneumonia Seen Five Times

During the treatment period, pneumonia was seen five times in four children, acute gastroenteritis in three, mild acute hepatitis in two, and aseptic femoral necrosis in one, Dr. Ward continued. By contrast, during the control period, 14 had 30 attacks of pneumonia, four severe acute gastroenteritis, one aseptic necrosis of the hip, and two salmonellosis. In the first three months after the end of the trial, 13 children had a severe crisis or sicklemia-related infection requiring hospital care.

"The greatest observation we made," Dr. Ward declared, "is that there are different varieties of the homozygous state: some are mild, some moderate, some severe. There is a great deal of heterogeneity in terms of the expression of symptomatology."

Over all, the trial suggested, he added, that prophylactic blood transfusions in these patients are "not harmful" and that there may be some children with severe disease who may benefit from the treatment, although it is not recommended as a routine therapeutic procedure.

Coauthors were Drs. I. J. Wolman and R. S. Jackson.

Adrenergic Blockade Helps Cut Stress in Diabetic Children

From University of Pennsylvania

► An ongoing trial of a beta adrenergic blocker in hyperlabile diabetic children continues to support early findings that the agent helps to prevent the effects of stress in such patients, a University of Pennsylvania investigator reported.

Dr. Robert Kaye, Professor of Pediatrics, said the "encouraging preliminary results" suggest that adrenergic blockade may be useful as adjunctive treatment in the psychotherapy of these youngsters.

The trial was launched following the observation that diabetic children experienced a more rapid rise of blood ketones following epinephrine injections than normal children, Dr. Kaye recalled. Following adrenergic blockade in these patients, the rates of rise of ketones, free fatty acids, and glucose were significantly reduced.

The stress-linked biochemical response was dramatically demonstrated in studies of two diabetic preadolescent girls, who were virtually incapacitated by repeated hospitalizations for severe diabetic ketoacidosis, the physician continued. In one instance, during a stress interview, a marked rise in ketones and free fatty acids was documented. In the second instance, the youngster was pretreated with the adrenergic blocker before the interview and the biochemical response failed to occur.

A subsequent regimen of oral therapy with sotalol, an investigative adrenergic blocking agent, has markedly decreased the episodes requiring hospitalization in these patients.

The study population has now been increased to 15 hyperlabile diabetic youngsters, "and encouraging results are continuing," Dr. Kaye declared.

"The difficulty with these youngsters is that they are enmeshed in family stress and cannot cope with their emotional problems," he said. "Yet they tend to dissemble when they talk to a psychiatrist. They are very sweet, very pleasant, and try to hide the fact that something is wrong at home. The problem is that, unlike our stress interviews, which have an ending, the stress situation at home is a continuing one for these patients."

Recently, he disclosed, he and his collaborators have begun a pilot project of bringing in the patient's entire family for psychiatric interview. "We're finding similar stress patterns in members of the family as in the diabetic patient," he commented. "But while the free fatty acids rise in the nondiabetics also, they soon return to normal, whereas they remain elevated in the diabetic."

He noted that treatment for these hyperlabile youngsters must have a dual aim: that of changing the pattern of emotional responses that activate biochemical factors leading to diabetic decompensation and that of protecting the patient against the consequences of the emotional turmoil aroused during the early stages of total-family psychotherapy, when the child is forced to confront his feelings openly for the first time.

Coauthors were Drs. Lester Baker, Avner Barcai, and Nasir Haque.

Prostaglandins Found More Effective As an Abortifacient Than Oxytocin

Medical Tribune World Service

STOCKHOLM—Prostaglandin has become more effective than oxytocin as an abortifacient agent, Dr. Charles H. Hendricks, of the Department of Obstetrics and Gynecology, University of North Carolina, reported to a Conference on Prostaglandins in Fertility Control, organized by the World Health Organization's Research and Training Center on Human Reproduction at the Karolinska Institute here.

DR. HENDRICKS

Dr. Hendricks said he is convinced prostaglandin has become more efficient than oxytocin despite the fact that both drugs can produce the same type of increases in the uterine contractility pattern.

The crucial difference between the two drugs is presumably some direct effect on the cervix and lower uterine segment.

Dr. Hendricks' study of E 2 and F 2A prostaglandins was part of a three-part investigation of their effects as abortifacients—the first such investigation ever carried out in the United States. In addition to the University of North Carolina, the University of Southern California and Yale University were selected as sites for the research.

In Dr. Hendricks' study program, five women received E 2 prostaglandin in a dosage of 20 micrograms a minute and five F 2A at a dosage of 25-200 micrograms a minute. Complete infusion required 12 hours.

Of all 10 patients, only one of the F 2A group failed completely to abort. Six aborted during the initial infusion period. The mean time for complete abortion was about 18 hours for the F 2A series and 12 hours for the E 2 series.

Dr. Hendricks said he had concluded after his tests that both E 2 and F 2A were effective as abortifacients, with E 2 tending to have a higher success rate and to produce abortion in a shorter period.

Nausea and vomiting were observed more often with F 2A than with E 2, he said, but transient chemical vasculitis was seen in several patients who received E 2.

New Method Devised for Determining Virulence in Strains of Streptococci

Medical Tribune Report

BETHESDA, Md.—Georgetown University scientists, in research supported by the National Institutes of Health, have found a new method of distinguishing between harmful and harmless strains of streptococci.

"The method offers an additional test for evaluating virulence in the streptococci and possibly other organisms," Robert I. Krasner, Ph.D., a visiting professor in the Departments of Pediatrics and Microbiology, said.

His assistants were Linda M. Taylor and Mei C. Yang.

The method used was a modification of the nitroblue tetrazolium dye test, a procedure used to detect chronic granulomatous disease of childhood. The researchers mixed the dye in test tubes with two group A streptococcal strains and white blood cells taken from normal subjects. The dye, a yellowish color, is reduced to formazan, which shows up as a blue-black compound.

"The greater the intensity, or darkness, of the dye, the greater is the stimulation of the white blood cells," Dr. Krasner said. "This results from the cells' ingesting the bacteria and then killing them....

"We found that the avirulent strain [of streptococci] is taken up and killed by the white blood cells as evidenced by reduction of the dye. The virulent strain...is resistant to ingestion by the white blood cells."

Dr. Krasner emphasized that the research is preliminary. "Its present value is in the study of properties of bacteria that contribute to infection," he said.

Dr. Krasner is Professor of Biology at Providence College, Rhode Island. He has been studying at Georgetown in the division of pediatric virology.

NIH Photo

White blood cells are examined by Dr. Krasner in study of streptococci virulence.

Book Aims at Better Judgment In Use of Diagnostic X-Ray

Medical Tribune Report

WASHINGTON—The genetically significant dose from medical diagnostic x-ray procedures "can be significantly reduced" by implementing present recommendations for x-ray beam restriction, the Food and Drug Administration's Bureau of Radiological Health and the American College of Radiology declare in a newly published booklet.

The booklet, designed to improve professional judgment in the use of diagnostic x-ray procedures and to increase patient and user protection, says that in some instances "as much as two-thirds of the present exposure may not contribute to diagnostic information and therefore may be unnecessary."

Nearly 500,000 copies of the booklet are being distributed to physicians, medical students, podiatrists, veterinarians, and radiologic technologists.

Empiricism Urged in Finding Cause of Cancer

Medical Tribune World Service

BRISTOL, ENGLAND—A switch to the empiric approach could help provide conclusive proof, much more quickly than can laboratory investigation, that a human tumor is caused by a virus, in the view of M. A. Epstein, Professor of Pathology at Bristol University.

The proof might best be obtained by producing a vaccine against the suspected virus and administering it on a large scale to see if the incidence of the carcinoma decreases, says Professor Epstein, who in 1964 helped to isolate the virus associated with his name.

The Epstein-Barr virus could be the first proved to be carcinogenic in man. The virus was first discovered in 1964 in cells cultured from Burkitt's lymphoma, a tumor of children which is endemic in certain areas of Africa and New Guinea.

Since then there has been accumulating evidence, indirect and circumstantial, that the virus is the causative agent of the lymphoma, said Professor Epstein, in a MEDICAL TRIBUNE interview.

The only way to prove this definitely, however, would be to blanket-vaccinate against EB virus all children up to one year old in an endemic area and see if the expected incidence of the tumor drops.

Efficacy Can Be Tested

Furthermore, says Professor Epstein, before such a vaccination program is carried out, the efficacy of the vaccine can be tested. The EB virus has been shown to be the cause of infectious mononucleosis. A group of university freshmen, serologically negative for the EB virus, would almost certainly contract disease—"so you vaccinate them and see whether the vaccine protects them. If it does, then you know you have a vaccine that works against the EB virus."

Once the safety and efficacy of a vaccine had been proved, it could be given to children in areas where Burkitt's disease is endemic. If protection against EB virus results in a drop in the expected number of tumor cases, then some sort of causal relationship will have been demonstrated.

Since the peak incidence of the tumor in children is at the age of five, the experiment could be completed within five years or "10 at the most," says Professor Epstein.

"There are a lot of people who will regard this vaccination approach to the problem as heresy," says Professor Epstein. "They will say, 'You can't go and put a potential cancer virus into people. And how would you grow it? It only grows in malignant cells and it's not safe to use.' There are enormous problems—but polio vaccine was prepared in 15 years. It only took eight years to make rubella vaccine and only five to make a measles vaccine."

The present indirect evidence that EB virus is the cause of Burkitt's lymphoma is strong, he says. The virus is known to be a stimulator of lymphoproliferation. It can confer the power of unlimited growth, in vitro on normal human lymphocytes, which ordinarily will not grow in tissue culture. It is also responsible for the in vivo lymphoproliferation of infectious mononucleosis.

Recently a herpes virus has been shown to induce a fatal lymphoreticular tumor on inoculation into both owl monkeys and marmosets. A herpes virus indistinguishable from the EB virus, has been proved to cause Marek's disease, a lymphomatous syndrome of chickens, says Professor Epstein. Furthermore, a vaccine has been made which protects the chickens against the disease.

Despite all this evidence, it is possible that in human beings the EB virus may be no more than an "opportunistic passenger, living as a commensal in lymphoid cells, particularly where these are hyperactive in proliferative disease states."

Special Measures to Prevent Synthetic-Turf Injury Urged

Medical Tribune Report

ITHACA, N.Y.—Prophylactic measures should be taken to prevent "the larger and deeper abrasions occurring notably on synthetic turf," according to Dr. Alexius Rachun, Professor of Clinical and Preventive Medicine and team physician at Cornell University.

DR. RACHUN

Long-sleeve jerseys, extra padding about the joints, and full-length stockings should be worn by athletes playing on such a surface, he advised.

He observed that, in addition to dermatitis resulting from bacterial, fungal, and viral infections, vexatious and, at times, disabling skin problems among athletes originate from mechanical, iatrogenic, and allergic factors.

Among the mechanical factors, other than synthetic turf, that cause skin lesions, he said, is faulty athletic gear.

"Protruding rivets and bolts in football helmets and burred or missing cleats with exposed prongs occasionally inflict skin wounds to the wearer or to others," said Dr. Rachun. "Routine checks on athletic apparel should include a survey for these defects."

He further observed that avulsion may occur when fingernails and toenails are not kept short and that infected ingrown toenails arise from the pressure of tight shoes.

One source of iatrogenic lesions, he pointed out, is the treatment room, where inept or careless use of heat modalities may result in local skin burns.

Proper Training Stressed

"Prevention," Dr. Rachun said, calls for the employment of therapists trained in the proper use of the modalities. The athlete under their care should be attended throughout treatment, which should be stopped whenever complaints of excessive heat over the treated area are made."

Skin irritation from tightly applied tape also fall within the iatrogenic category, he said. These are usually minor friction burns and commonly occur about the ankle in the area of the Achilles tendon and on the dorsum of the foot, he noted, adding that ulcerated lesions with secondary infections do occasionally develop.

"Gauze padding, a dab of petrolatum, and care against drawing the tape too tightly over vulnerable areas are useful precautions in minimizing or preventing these lesions," he remarked.

Among the iatrogenic skin problems, Dr. Rachun included burns due to exposure to quicklime "injudiciously" used in striping playing fields.

"Scrupulous attention on the part of athletic administrators and grounds-keeping personnel should be observed in ensuring the use of lime of safe composition," he said.

Discussing the allergic category, Dr. Rachun said that contact dermatitis occurs with "moderate frequency." Sensitivity to tape, as opposed to simple mechanical irritation, sometimes presents a problem to both the athlete and the trainer, he noted. In known cases of sensitivity, he suggested that a protective layer of gauze or similar material be applied between the skin and the tape, and he suggested that nonallergenic tape, usually too costly for ordinary athletic budgets, be used sparingly over bare skin areas to secure a firm strapping.

Tincture of benzoin compound applied to skin as an adherent prior to taping is a more common source of contact sensitivity, and he recommended the use of suitable substitutes containing rosin, which have been found to be less sensitizing.

"The dermatitis resulting from the topical application of some antibiotic ointments, soaps, and mercurial antiseptics," he added, "can be eliminated by the use of carefully selected substitutes having a low index of sensitivity."

Physician Cycles to Work

Finishing last leg of 4-mile bicycle trip is Dr. Donald Eitzman, Professor of Pediatrics, University of Florida College of Medicine, Gainesville. Dozens of physicians at the center travel to and from work by pedal power.

Severity of Injuries To Ankle Graded More Easily the Next Day

Medical Tribune Report

BOSTON—Grading the severity of ankle injuries in athletes can be done more accurately a day after rather than immediately after the injury, according to Dr. Thomas B. Quigley, of Howard Medical School.

"What may appear as a trivial sprain immediately after injury, with minimal pain, tenderness, and edema, may have become severe and disabling when examined after 24 hours," he said. "Occasionally, an apparently severe sprain will, after a day of treatment, be found to be of only moderate or minor degree.

"The most common ankle injury, a grade 2 sprain of the anterior tibiofibular and fibulotalar ligaments, if seen immediately after injury and treated, should be restored to full athletic activity eight to 10 days after injury."

Sprain Graded by Severity

The degree of ankle ligament sprain can be graded in severity from 1 to 4, Dr. Quigley said. Grade 1 is the least degree of ligament stretch that may be considered to be a sprain, 2 is the most common, 3 is a severe sprain with the ligament still in continuity, and grade 4 is complete rupture or avulsion of the ligament.

"A golden opportunity for definitive diagnosis of ligament rupture or avulsion is present for about half an hour after injury," he said. "Gentle, diagnostic manipulation reproducing the mechanism of injury during this period, before edema and spasm have developed, is not uncomfortable."

Treatment of ligament sprain in the absence of fracture, suggested Dr. Quigley, should include cold, compression, rest, and elevation for the first 24 hours. After that, heat and gentle massage may be applied.

Dr. Quigley said that surgical repair is better than immobilization for cases of rupture or avulsion of the deltoid ligament. On the other hand, primary repair need rarely be done for rupture of the fibular collateral ligament, and surgical repair of a rupture of the anterior tibiofibular ligament is not necessary.

Blue Cross Unit To Give Coverage For Outpatients

Medical Tribune Report

DAYTON, OHIO—A three-month trial of "Verticare"—providing outpatient insurance coverage—has been undertaken by Charles F. Kettering Memorial Hospital here and the local Blue Cross plan.

The program has been named CHOICE (for Comparative Hospital Outpatient/Inpatient Care Experiment) by the hospital's physicians and administrators who initiated the idea and developed it in conjunction with Blue Cross of Southwest Ohio and the National Cash Register Company.

To Get Outpatient Service

Under the pilot program, appropriate patients who are members of Blue Cross or of N.C.R.'s hospitalization coverage plan will receive on an outpatient basis all the necessary hospital services they might ordinarily have received as inpatients. Blue Cross or N.C.R. hospitalization coverage will pay for the services. Robert L. Willett, associate hospital administrator, said:

"If we can accomplish treatment of health problems while the patient is still 'vertical,' . . . it will save time and money for the patient, the hospital, the patient's health-care program, and ultimately the public. . . .

"The Verticare idea, put into practice nationwide, could take much of the pressure off overcrowded hospitals. . . . It might even reduce the number of additional hospital beds required to serve many cities in the future."

Dr. Harold Fishman, a member of the Kettering medical staff who helped formulate the plan, said:

"The program ends a real struggle of conscience for the physician. Often we find a family that will face real financial hardship if a course of treatment is undertaken in such a way that insurance will not pay.

"In the past, our only recourse has been to order the patient admitted to a hospital, even though admission may not have been absolutely required from a medical standpoint.

"With the economic pressure relieved by Verticare, the doctor can be a lot more objective about tying up hospital beds and services."

Purely diagnostic tests, physical examinations, and clinic visits are not covered by the program.

A.M.A. Is Planning to Set Up Liability Insurance Program

Medical Tribune Report

CHICAGO—A professional liability insurance program, to be established initially in four to seven states by 1972, was announced here by the American Medical Association.

The new program will not interfere with group insurance plans that state medical societies now have in operation in 24 states, the A.M.A. said.

One of the program's key features is peer review, which will permit members of a medical society to refuse to admit into the program those deemed by their colleagues to be unacceptable or representing a high liability risk.

Educational Efforts Emphasized

The program will emphasize educational efforts, including seminars, workshops, lectures, manuals, and periodic bulletins, to inform physicians of the causes of malpractice claims and to work with them on methods of eliminating these causes, the A.M.A. said.

In addition to peer review, individual medical societies also will participate in writing terms of the insurance policies, in evaluating claims, and in day-to-day administration of the program.

Worked out by the A.M.A. with the CNA Financial Corporation, which operates the Continental Casualty Company and the Continental Assurance Company as subsidiaries, and the brokerage firm of Marsh & McLennan, Inc., the program is aimed at easing the cost and increasing the availability of malpractice insurance.

Provisions of the plan include predetermined rates for the first three of the program's five years, based on regional actuarial experience and socioeconomic trends; guaranteed renewability as long as peer review requirements are met; and profit-sharing incentives.

The insurance offered has been designed in two layers.

The basic layer, up to $100,000, encompasses the smaller but more frequent claims. This will be available on a cost-plus basis in which the society's own loss experience will be a major factor in computing the final cost, based on a prearranged rating formula.

If this layer of coverage is operating on a profitable basis, members will receive a credit reflecting income from the premiums collected for this $100,000 layer of coverage.

Coverage up to $1,000,000 will be provided on a traditional insurance basis. A further $4,000,000 may be available to applicants meeting certain additional eligibility requirements.

CNA said it intends to make 75 per cent of the gross premium dollar available for claims and claim expenses, in contrast to the 55 to 60 per cent of most liability policies. Economy will be brought about, it said, through mass marketing and computerization.

Through the use of a computer data bank, rating structures, claim information, and program operations can be monitored daily, CNA said.

Particulars of Plan Given

Under the plan, CNA will establish three to five programs in four to seven states. Each program will operate at the state or county level with an administrator selected by the local medical society. No physician will be dropped from the plan without consent of his medical society.

The program "breaks new ground" and "is, for me, a very satisfying occasion," commented Dr. Carl Hoffman, president-elect of the A.M.A. and chairman of its Committee on Professional Liability.

"The fact is that medical malpractice claims have risen nearly 50 per cent over the past five years," he said. "These claims are increasing at a rate higher than the general inflation in our national economy."

The new A.M.A. program was announced at a press conference headed by Dr. Hoffman. Other participants were Jacque W. Sammet, president of Continental Casualty and Continental Assurance, and Newell P. Weed, Jr., executive vice-president of Marsh & McLennan.

The fundamental approach in the new program, Mr. Sammet summed up, "is one of a risk-control system, rather than the traditional transfer of risk."

"This means a joint effort to pinpoint the causes of claims and reduce their chance of recurring," he said. "It means a closely coordinated program of legal, claim control, and other loss prevention techniques."

Hospital's Operating Cost Up

NEW YORK—The cost of operating New York Hospital climbed from $32,000,000 in 1965 to $62,000,000 in 1970, according to the annual report. Factors cited in the increase included a rise in the yearly compensation of interns from $3,500 to $10,500, a rise in the starting salary for registered nurses from $4,500 to $9,420, and a rise of 278 per cent in the salaries of the resident staff during the five-year period.

Fantasy and Medical Students at Yale

Eleven medical students who at one time fantasied a career in the arts and letters, instead of medicine, turn out to be a different breed of cat from 31 of their classmates, whose fantasied alternative careers were in science, teaching, law, or business, according to a recent study in the *American Journal of Psychiatry.*

Apparently, a little yearning is a dangerous thing if the humanities figure in the yearning. A questionnaire was sent to the 83 graduating students of the 1970 class at Yale University School of Medicine in an attempt to find out something about the problem of the alienation of today's youth, without considering what they are alienated from. The study sought to locate a dissatisfied group of medical students and define the group's characteristics. (There were 46 replies, cut back to 41 by the failure of five students to report any fantasy or to fantasy in any of the above areas. We assume them to be would-be firemen or trolley-car conductors.)

In terms of percentages, more of the 11 "dissatisfied" arts and letters fantasiers than their classmates had seen psychiatrists, entertained thoughts of suicide, experienced feelings of depersonalization, failed to perceive Yale as one of the top three medical schools, majored as undergraduates "in some area subsumed under the rubric of arts and letters," attended at least one concert during the academic year, read more nonmedical books (in fact, read more books than anyone except the would-be teachers), failed to claim a religious affiliation, used marijuana (although 13 of the 30 "satisfied" students also used it), and did not intend to enter academic medicine.

The authors seem to consider these 11 students as one-down, "...more conflicted about their identity...like foreigners in a community with strong scientific emphasis," not like the rest of us chickens.

A New Englander once wrote, "...only as far as [people]...are unsettled is there any hope for them." Of course, he was a Harvard man (class of 1821) named Emerson, and heaven knows what he thought of Yale.

We wish the names and addresses of those 11 foreigners in a scientific community had been included so we could find one in an hour of medical need or middle-aged identity crisis. The "satisfied" others, presumably, will all be teaching or busy writing love letters to Yale.

* * *

And, speaking of marijuana, we're happy to share with you the first paragraph of a letter to the editor of England's *Journal of Pharmacy and Pharmacology*:

"A disadvantage of previous methods of assaying the potency of cannabis preparations...is that they cannot be used for determining effect of cannabis in rats. One possible approach is to use the degree of ataxia or catalepsy induced by the drug, another is to use vocalization as reported by Carlini & Kramer (1965). They found that, under the influence of cannabis, rats vocalize when they are touched."

So if you hear any rats singing....

* * *

"Amidst cheers the Secretary garlanded Dr. G. K. Tyagi, following which Drs. K. M. Ial, M. Prakash, O. P. Goel and A. U. Khan paid their tributes to him. They praised the hard work and sincerity with which Dr. Tyagi developed this Medical College from a scratch."

—*Journal of the Indian Medical Association.*

You never know into what a scratch will develop.

Readers are invited to contribute items of 100 words or less to this column. Contributions should be mailed to MEDICAL TRIBUNE, *110 East 59th St., New York, N. Y., 10022.*

Tribune Economic Analysis

Two Major Blunders Cited In Freezing Wages, Prices

By ELIOT JANEWAY
Publisher of Janeway Service

THE SUCCESS of "me-tooing" Mills, the chairman of the House Ways and Means Committee, is not only good business for Nixon. It is the only business left for him to try to get into. But Mills is not in the business of "stunt" politics—any more than Chou En-lai is. Looking backward at the flash-in-the-pan promise of Nixon's last stunt, his China ploy, it threatened to turn into a fiasco when the economy started to collapse. Looking forward to the even more sensational dramatics of his new stunt, it was born of panic and formalizes his new status of dependence on House Ways and Means Committee Chairman Mills. This new political stunt will work as well as the economic performance measuring up to it, and Chairman Mills has the measuring rod.

Overkill is the problem—as it generally is when overdefensiveness gets in the way of generosity. Not being in politics myself, I feel inclined to allow myself the luxury of one vehement "I told you so" in derision of all the cliché artists and slogan mouthers who have been giving me a hard time for sounding the alarm.

Indebted to Chairman Mills

As for Nixon, because he is in politics, he would have been in much better shape—preparatory to triggering the biggest buying panic in American stock market history, in the worst situation in American financial and economic history—if he had taken the high road and acknowledged his debt to the creditor he now has no alternative but to satisfy—namely, Chairman Mills. Indeed, if he had done so, he might have managed to have his speech writers do a better job of borrowing Mills's entire program instead of forgetting a basic ingredient—namely, cash tax rebates for export earnings.

In my formulations, I never went further than to reiterate that the "hands off" labor policy had been bankrupt as a policy and an invitation to national bankruptcy ever since the General Motors strike of 1970 and to urge the President to make the Government a party to key wage negotiations in the public interest. Rushing into a wage-price freeze is as reckless an expression of extremism as refusing to go so far as jawboning was in the first instance. It is the economic policy-making equivalent of dropping an atomic bomb where reconnoitering with an appropriately armed helicopter would have been sufficient.

90-Day Clause a Blunder

The edict about wage-price controls would have been more formidable as a threat. I regard the 90-day clause as Nixon's first blunder. His second was the decision to waste 30 of the 90 days by giving Congress a vacation it does not want instead of calling it back into emergency session. No doubt a reluctance to brave Congressional criticism explains the decision to wait. It being par for the course that critics of the present Administration are less than competently plagiarized without being consulted, a stretch-out of present three-year labor contracts into a four-year term—with upcoming monthly cost-of-living and annual pay increases deferred—would have been less foolhardy or provocative.

"Wait and see" is the biggest single danger posed by the 90-day emergency freeze. If business buying and consumer spending respond to the Administration's announcement that it means to wait and see for 90 days by doing the same, the panic will come back on just as if the President had not bought time by making his move. As a practical matter, the 90-day clause became academic on day one. Everyone expects it to be extended.

The headaches are here—right on the heels of the first hurrahs in the headlines. If "wait and see" turns out to be the general reaction of the consuming public—specifically, if consumers wait to see how long it takes for the fact of overtime to replace the fear of unemployment—the automotive beneficiaries of the new deal will be manufacturing more troubles than sales. Their most immediate trouble is that the promise of excise tax relief after Congress returns is already responsible for sale hold-backs while Congress is on vacation.

The exemptions are aggravating the troubles. To take one Detroit headache maker, the domestic manufacturer needing price relief most happens to be the one which neglected to make a timely announcement of its price increases. No point in crying about spilt milk, but the administrative can of worms labeled "inequities" is open. Tuition fees have an exemption, so has agriculture, and so apparently have exports. What with labor accusing the new deal as a sellout to business and the Administration leaning over backwards to prove that it isn't, the freeze threatens at the outset to prove more effective in preventing business buying from picking up than in reassuring consumer spending to do so. Rolling over for groups claiming exemptions is the one sure way to slam the "freeze" trap shut on the Administration.

War Experience Relevant

The war experience is relevant—if only because past experiences of wage and price freezes have been wartime experiences. The Pearl Harbor type of event has signaled their imposition, and, therefore, peace has signaled their termination. What is elusive about the new experiment in controls is that it is being started just when a war is presumably being finished, after said war turned the country upside down because fought without the controls needed to support a war.

In *The Struggle for Survival* (my history of how Roosevelt ran the controls system during World War II) and in my *Economics of Crisis* (my history of the economic impact of past emergencies), I put forward the concept of "war in peace," using it to describe the troubled state of affairs that develops when the suspension of shooting does not announce the arrival of peace. Only the condition of "war in peace" can explain the retreat to controls in the absence of shooting. If the outbreak of war is not the signal for imposing them, what is the signal for terminating them? The only answer Nixon can hope for is a return to prosperity without inflation. Don't hold your breath.

The decree banning gold shipments was another blunder. Only friendly creditor central banks were getting gold anyway, and only in large amounts. Nothing has been changed behind the headlines. Only the illusion of devaluation has been encouraged. It is an illusion. The fact is that the central banks of the dollar creditor countries are being forced to buy dollars in order to prevent their export products from being priced up and out of a shrinking market. The dollar crisis is being overestimated by the opinion makers, who were also underestimating the domestic panic. Up to now, bad quotes for the exchange value of the dollar in Europe have been the price of strengthened American bargaining power in Europe. But America has been looking bad while doing better. Connally is moving to call Europe's bluff with gold near the top of its trading range.

Many patients react to being told how sick they are by taking off on a big spree. The stock market has a long rocky road to travel back to health. Meanwhile, the initial response of the stock market is proof positive that the Burns philosophy and the Mills plan will be trusted to work and, moreover, will work—if only the White House will let itself be shown how. The market is worth a markup for effort and a markdown for execution.

Named Dean at Stanford

Appointed dean of the Stanford University School of Medicine and Vice-President for Medical Affairs is Dr. Clayton Rich. He was at the University of Washington School of Medicine.

Mayo Clinicians to Study Clinical Atherosclerosis

Medical Tribune Report

ROCHESTER, MINN.—A new coordinated research program in clinical atherosclerosis has been launched at Mayo Clinic under a five-year, $2,100,000 grant from the National Heart and Lung Institute.

The Mayo research facility will be termed a Specialized Center of Research, a program developed by the National Institutes of Health.

The major activities of the Mayo project will be conducted within the division of cardiovascular diseases by a 40-man team under the direction of Dr. H. N. Coleman.

Among the research highlights will be a study of the role of cholesterol and related sterols in the disease, an attempt to relate the patient with certain abnormalities to atherosclerotic disease, and a program to screen 5,000 school-age youngsters to determine the incidence of elevated cholesterol in children.

MEDICAL MEETING SCHEDULE

Foreign Meetings

Oct. 3-8 ......American Society of Plastic and Reconstructive Surgeons, *Montreal*
Oct. 5-9 ......International Seminar on Family Planning in Health Services in Socialist Countries, *Rostock, East Germany*
Oct. 9-16 .....American Urological Association, *Estoril Sol, Portugal*
Oct. 9-17 .....American Fracture Association, *Guadalajara, Mexico*
Oct. 10-15 ....Latin-American Cancer Congress, *Caracas*
Oct. 15-17 ....General Medical Association for Psychotherapy, *Mainz, West Germany*
Oct. 17-24 ....International Fertility Association Congress, *Tokyo*
Oct. 17-25 ....World Congress on Fertility and Sterility, *Tokyo and Kyoto*
Oct. 18-21 ....International Federation for Hygiene, Preventive Medicine, and Social Medicine Congress, *Madrid*
Oct. 18-21 ....European Congress of Allergology, *Marseille, France*
Oct. 19-22 ....Bolivarian Congress of Endocrinology, *Caracas*
Oct. 20-26 ....Pacific Dermatologic Association, *Guadalajara, Mexico*
Oct. 24-29 ....International Congress of Aviation and Space Medicine, *Tel Aviv*
Nov. 11-14 ...Asia Pacific Congress on Diseases of the Chest, *Taipei*
Nov. 19-20 ...Norwegian Otolaryngology Society Annual Meeting, *Oslo*
Nov. 19-22 ...Congress of the Asian and Australian Society of Neurological Surgeons, *Tokyo*
Nov. 21-25 ...Conference of Latin American Medical School Faculties, *Maracaibo, Venezuela*
Nov. 22-26 ...Asian-Pacific Congress of Radiology, *Melbourne, Australia*
Nov. 28–Dec. 4 .....World Congress of Psychiatry, *Mexico City*
Nov. 29–Dec. 4 .....International Congress of Surgeons, Western Hemisphere Congress, *Panama City*

Oral Contraceptives May Predispose To Migraine in Some Young Women: Page 3

Cholesterol Essential as Mediator For Conduction of Nerve Impulses: Page 16

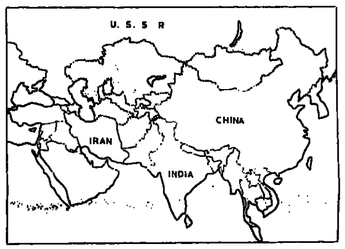
Medical Tribune
and
Medical News

In Two Sections, Section I

world news of medicine and its practice—fast, accurate, complete

Wednesday, September 22, 1971
Vol. 12, No. 37

On the Trail of Cancer in Iran



Near Gomishan, Iran, above, Dr. Janez Kmet (facing camera), of the IARC, is trying to uncover the factors causing high incidence of esophageal cancer in the region. Left, map shows distribution of the disease in Asia. The belt ranges from north of Korea through Mongolia, large sections of the Soviet Union and northern Iran and terminates in Turkey.

Unit Traces Esophagus Cancer By Study of Alcoholic Drinks

Medical Tribune World Service

LYON, FRANCE—Intriguing odors come from the anonymous brown bottles on the labelling bench in a laboratory at the International Agency for Research on Cancer here. One bottle unmistakably contains rum and another one vodka. A third holds a measure of distilled cider.

But the bottles are not for any kind of celebration. The scientists at Lyon are more interested in the carcinogens they may contain than in their alcohol content. The purpose is to investigate the many puzzling variations in the etiology and incidence of esophageal cancer, an inquiry that is being conducted in both hemispheres.

In France, an area of high incidence, cancer of the esophagus has been usually linked with excessive consumption of strong alcoholic drinks, tobacco having a

Last of series of four articles.

synergistic role. But comparative studies by IARC experts of different regions in France throw doubt on the absolute nature of this link. And in Iran, another area of high incidence, alcohol and tobacco do not seem to play a significant role.

The IARC is also following the behavior of the disease in other parts of Asia, in the Soviet Union, in Ceylon, and in the Caribbean.

"There is always a pattern in cancer, but the pattern for cancer of the esophagus is very disconnected," Dr. J. A. Tuyns, of the IARC department of epidemiology and biostatistics, told MEDICAL TRIBUNE.

"It may be the only type of cancer where differences in mortality vary by a ratio as much as one to 50. Mortality from cancer of the esophagus is 50 times higher

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Scan of Liver Less Specific Than Supposed

Medical Tribune Report

LOS ANGELES—The sensitivity of the liver scan in cancer patients has been frequently noted, but its lack of specificity has not been sufficiently emphasized, a meeting of the World Federation of Nuclear Medicine and Biology was told here.

Experience with 63 patients with histologically proved cancer indicates that the value of this procedure in patients with cancer is limited, according to Drs. Joseph A. Volpe, Robert J. Lull, and Martin L. Nusynowitz, of the Nuclear Medicine Service at William Beaumont General Hospital, El Paso, Tex.

Results of the liver scan and histologic studies done within six months of the scan agreed in 56 of 63 cases, they said. Of the 46 cases in which the scan was compared with autopsy findings, the correlation was positive in 44.

Scan and biopsy correlated in 12 of 17 cases, but this relatively poor agreement cannot be attributed only to inaccuracy of the scan, since negative biopsy results are frequently erroneous, the physicians said.

In 22 cases of proved liver metastases, bilirubin, serum glutamic oxalacetic transaminase, and alkaline phosphatase were measured, and all three of these tests were normal in seven cases, a false-negative incidence of 32 per cent. All 22 cases showed an abnormal scan.

The three tests were also normal in six of 16 patients with autopsy-proved nontumor liver pathology, a false-negative incidence of 37.5 per cent, and again all 16 had abnormal scans.

The liver scan cannot be used as a gauge

Continued on page 14

Hospital Group Backs Nixon On the Freeze

Medical Tribune Report

CHICAGO—Delegates of the American Hospital Association, suddenly finding their organization working in behalf of President Nixon's wage-price freeze, voted to endorse the economy-shoring move.

But even the A.H.A. president had to concede at the annual convention here that "we don't know yet what it will mean to hospital economics—we're expecting a lot more guidelines than we have now."

Two days later, the 700-bed Wesley Memorial Hospital here began firing employees in a move to reduce the payroll by 12 per cent. A spokesman said the hospital was "caught in a bind on contracts because now we can't raise our rates."

DR. CROSBY

The A.H.A. involvement in the freeze was announced on the eve of the convention by its executive president, Dr. Edwin L. Crosby. He said the U.S. Office of Emergency Preparedness had asked the association to serve as a clearinghouse for information concerning the effects of the freeze on the nation's hospitals and other health care institutions.

The A.H.A. president, Jack A. L. Hahn of Indianapolis, told a news conference that he saw the job as one "to make sure the hospitals know the OEP policy and serve as liaison" during the 90 days of the initial freeze imposed by President Nixon.

Continued on page 14

Cendehill Vaccine Held Most Fitting In the Fertile Age

Medical Tribune World Service

TORONTO—Cendehill vaccine is the most suitable vaccine for use in safe immunization of women of childbearing age against rubella, according to Dr. Jerome A. Gold, Clinical Associate Professor of Medicine at the Medical College of Pennsylvania.

Dr. Gold told the International Rubella Conference on Protection for the Post-Pubertal Female here that sufficient data are now available to conclude that post-pubertal females can be vaccinated with rubella vaccine with reasonable safety and efficacy.

Epidemiologic surveys world-wide have indicated that between 10 per cent and 20 per cent of adult women are susceptible, Dr. Gold said. In some parts of the United States the rate is much higher—39 per cent, for example, in parts of California, 36 per cent in Delaware, and 31 per cent in Florida. In Puerto Rico 54 per cent rubella seronegativity in women between the ages of 17 and 37 has been confirmed; in

Automated Ultrasound Device Detects Pre-eclamptic Women

Medical Tribune Report

PHILADELPHIA—An automated ultrasound blood-pressure instrument has proved more accurate than clinic personnel in detecting pre-eclampsia heralded by hypertension, a Howard University team reported here to the National Medical Association. Detailing the findings in 38 pregnant patients at a prenatal clinic followed through delivery, the team said that the ultrasound instrument noted blood pressures in 10 cases at least 20 mm. Hg systolic and 10 mm. Hg diastolic higher than that observed by the admitting nurses.

"Of these, two cases were clearly hypertensive, according to the instrument, and were recorded as clearly normotensive by the admitting nurse. Both were admitted within two days with pre-eclampsia and obvious hypertension," said Dr. Augustus Godette, Fellow in Obstetrics-Gynecology.

He added that the device, an Arteriosonde blood-pressure instrument (ABPI), also "monitored blood pressures accurately throughout" therapy in a series of patients with eclampsia, postpartum hypertension, persistent hypertension, or hemorrhage. The monitoring proved to be a useful guide to treatment, "helping to alert staff to 'overshoot' in drug therapy."

In undertaking the study, Dr. Godette said, he and Dr. John F. Clark, Professor of Obstetrics-Gynecology, postulated that "if the ABPI indicated pressures 20 mm. Hg systolic or 10 mm. Hg diastolic above the admitting nurse, there was a possibility of early pre-eclampsia."

The instrument works by detecting arterial wall motion under a deflating occlusive cuff, Dr. Godette explained.

The study population included 70 patients, 38 of whom were followed through delivery. The ABPI readings were compared with nurse B.P. determinations in 61 cases (167 comparisons) and to physician determinations in 67 cases (245 comparisons). The results showed that the mean difference in systolic determinations was 4 mm. Hg for physicians and nurses, but the standard deviation was higher (11 mm. Hg) for the nurses than for the physicians. In determining diastolic pressures,

Continued on page 17

Convulsions in Cholera Patients May Follow Magnesium Reduction

Medical Tribune World Service

VITTEL, FRANCE—The abrupt onset of convulsions in patients undergoing fluid therapy for cholera may be due to a sudden reduction in plasma magnesium, it was suggested here by Dr. Akio Kobayashi, specialist in nephrology and gastroenterology at the National Children's Hospital, Tokyo.

Dr. Kobayashi told participants in the first International Symposium on Magnesium Deficit in Human Pathology that hypomagnesemia had been found to occur consistently after the initial rehydration of cholera patients. This phenomenon reversed the hypermagnesemia which was observed prior to treatment. During the 24 hours which followed initial rehydration of the patients, the magnesium deficit continued to increase, with various choices of fluid and electrolyte 4reatment. Normal plasma values were found again in the course of convalescence.

He warned against the conclusion that the hypermagnesemia observed at the outset indicated a sufficiency of the Mg ion, since it was primarily a measure of the severity of dehydration. Thus, the administration of fluids revealed the underlying deficiency. Convulsions, coma and other central nervous system complications in cholera patients were especially common in the pediatric age range.

"Clinical experience has shown that intravenous magnesium sulfate is frequently efficacious in treatment of convulsions," Dr. Kobayashi said.

During an epidemic of El Tor cholera, plasma and fecal magnesium levels were measured in 59 patients admitted to the San Lazaro Hospital in Manila, the Phillipines, he reported. The patients were randomly divided into four groups. The first group received both initial rehydration and maintenance therapy with lactated Ringer's solution. The second group was given lactated Ringer's solution for initial rehydration and thereafter received maintenance therapy with a solution including sodium, potassium, chloride and lactate. The third group had initial rehydration and maintenance treatment with physiologic saline. The fourth group was given lactated Ringer's solution with the oral administration of 10 per cent potassium citrate.

In all patients the plasma magnesium levels were elevated at the time of admission. The mean level in child patients from one to six years of age was 2.68 mEq./L. of plasma as compared with a normal level for this age of 2.41 mEq./L. High concentrations were also found in all other age groups.

Three hours after rehydration was begun, Dr. Kobayashi said, the values were "drastically reduced under the normal in all groups . . . observation at the end of 24 hours showed further reduction of the concentrations."

The degree of reduction in plasma magnesium was greatest in the third group of patients, treated with physiologic saline and sodium bicarbonate. The deficit was greatest of all, following initial rehydration, in two children who suffered from convulsions.

■ ■ ■

Mass X-Ray Exam Seen More Useful Than Symptomatology in Lung Cancer

Medical Tribune World Service

ROME—Mass x-ray examination in East Germany has proved "two or three times more effective" than diagnosis by symptoms in the detection of lung cancer, according to Dr. H. Berndt, of the Robert Rössle Clinic, Institute of Cancer Research, East Berlin.

Similarly, the five-year survival rate is two or three times as high in lung cancer detected by radiologic screening as in lung cancer diagnosed by symptoms, he said.

"Mass x-ray examination detects peripheral cancers and has convinced us that most central cancers begin in the periphery of the lung and grow into the hilus structures later," Dr. Berndt told the third International Seminar on Prophylaxis and Prevention of Cancer. "Resection rate in detected lung cancer is very much higher than in symptomatic cancer."

He said that about 10,000,000 persons are screened annually in East Germany and about 40 per cent of all lung cancers are detected.

"Immediately after the end of the war, mass miniature radiography was introduced as a tool for control of tuberculosis," he said. "At present, about 85 per cent of the adult population are examined annually."

Dr. Berndt said that of the 10,000,000 screenings films examined annually, about 8 per cent are considered as abnormal.

"By comparison with the radiographs of the preceeding examinations, the number can be reduced to about 80,000," he said.

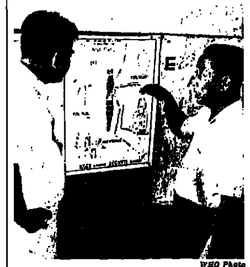
Only 30% of the Physicians In Israel Smoke Cigarettes

Medical Tribune World Service

JERUSALEM—Only 30 per cent of all Israeli doctors smoke; another 30 per cent have stopped smoking; the rest never smoked. These findings emerged in a survey by the Ministry of Health.

Of those physicians who still smoke, two-thirds said they had tried to give up the habit and had failed. Some 70 per cent of the nonsmokers thought the medical profession should set an example by not smoking. Only 55 per cent of those who had stopped shared this view, as did only 34 per cent of those who still smoke.

A Briefing in Manila



WHO Photo

Yellow fever is extremely rare in Asia, but health authorities remain extremely wary because the Aedes aegypti mosquito has a wide distribution. In Manila, Aumador Corcego (r.), of the Philippines Quarantine Service, apprises a physician of its characteristics.

Philippines Lacking MDs; Ceylon Acts on Shortage

Medical Tribune World Service

MANILLA—A "brain drain" is rapidly depleting the supply of physicians in the Philippines.

More than 9,320 practicing physicians have left the country, according to a study by Dr. José Cuyegkeng, executive director of the Association of Philippine Medical Colleges.

Of these, 5,720 are permanently lost, having established residence abroad with no intention of returning to their country.

The remaining 3,600 are temporarily out of the country and will eventually return, the study revealed.

COLOMBO—The Government has taken emergency steps to halt a serious loss of doctors to foreign countries. The action has been taken at a time when the country is facing the threat of a major outbreak of poliomyelitis, among other health problems.

The first measure was to impose an immediate and total ban on the departure of physicians to take jobs abroad. The only exceptions will be made for those who had signed contracts before May 12 of this year.

At the same time, Prime Minister Sirima Bandaranaike has directed an appeal to Ceylon's doctors already working in other countries to return.

Finally, the Government is considering the abolition of an examination given by the Educational Council for Medical Graduates that qualifies doctors for practice in the United States.

About 200 doctors—more than half the annual output of Ceylon's two medical colleges at Colombo and Peradeniya—left the country last year, an official told MEDICAL TRIBUNE.

More than 70 left during the first half of the current year, and there is a large backlog of applications.

It Is Still a Problem, But Tapeworm Rate Declines in Finland

Medical Tribune World Service

OULU, FINLAND—Two decades ago one in every five persons in Finland had tapeworm; now the rate has fallen to one in 20, but the worm still represents an important national health problem.

Changed eating habits and improved hygienic and sanitary conditions are largely responsible for the drop in the incidence rate. Details of the battle being carried out against diphyllobothriasis were given at the second International Symposium on Circumpolar Health here by Dr. W. Nyberg, of the Minerva Institute for Medical Research in Helsinki.

He said some worm carriers develop a manifest megaloblastic anemia now known to be a vitamin B_{12} deficiency state. Describing research into this condition, he said Diphyllobothrium latum acts on the B_{12}–intrinsic factor complex, releasing the vitamin from its bound form. Most of the liberated B_{12} is then taken by the worm and not the host. One in 50 worm carriers develops a manifest megloblastic anemia and 51 per cent have abnormally low serum B_{12} values.

Although the detailed mechanism by which the worm splits the B_{12}–intrinsic factor complex is not known, there is some evidence that the worm contains an as yet unidentified factor capable of releasing the bound vitamin.

Dr. Nyberg described clinical studies in which radioactive B_{12} was given orally to tapeworm carriers. When a B_{12} absorption test was performed, it was found that both anemic and nonanemic worm carriers absorbed significantly less B_{12} than controls. This pointed to the fact that D. latum, even in nonanemic carriers, impairs the absorption of vitamin B_{12} by its host.

"The consequences of the latent B_{12} deficiency of nonanemic worm carriers are not yet fully understood," he declared, "but it is worth mentioning that some of these patients develop neurological eye lesions."

■

Swimming Pools Store Water In Kenya Cholera Emergency

Medical Tribune World Service

NAIROBI—Kenyan officials have hit on a new way of fighting cholera—by using portable swimming pools as emergency water tanks.

When the recent cholera alert began, portable pools were flown from Nairobi to many outlying areas where the inhabitants normally rely on rivers and lakes for their drinking water. Water was pumped into the pools, treated to kill bacteria, and then drawn off again through a plastic pipe for drinking and washing.

Water-borne infection dropped sharply in areas where the emergency tanks were installed, officials reported.

NEWS INDEX

CLINICAL NEWS NOTE: "Clinical experience has shown that intravenous magnesium sulfate is frequently efficacious in treatment of abrupt onset of convulsions in patients undergoing fluid therapy for cholera." (Dr. Akio Kobayashi, specialist in nephrology and gastroenterology at the National Childen's Hospital, Tokyo; see above.)

FEATURE INDEX

Coming next issue: see page 5

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Migraine Linked To Contraceptive In Some Women

Medical Tribune World Service

ELSINORE, DENMARK—Oral contraceptives can bring out a latent tendency to migraine headache in some young women, and the correlation is even more marked when there was a previous history.

Clinical evidence of this, including a danger of thrombosis with permanent damage to the nervous system, was presented here by Dr. J. Desmond Carroll, consultant neurologist at the Regional Neurological Unit, Guilford, Surrey, England.

Dr. Carroll based his findings on studies made on two groups of women taking oral contraceptive pills. The first group consisted of 215 patients who had attended his clinic over a period of three years and who, prior to taking the pill, had never complained of significant headache. The second included 75 consecutive patients at the migraine clinic in whom there was a typical history of migraine headaches before being put on the pill.

Two Headache Types Present

In all, 70 women (32 per cent) in the first group experienced headaches. These included 48 whose headaches were generalized and of a vague type and 22 (10 per cent) with lateralized headaches that were apparently of the vascular migrainous type.

"It is clear in this analysis," Dr. Carroll told an International Headache Symposium here held under the sponsorship of the American Association for the Study of Headache and the Danish Migraine Society, "that in 10 per cent of these patients the pill brought out an inherent susceptibility to migraine, but more often in those who had a family history of headaches or allergic disorders."

Despite the fact that many patients stopped taking the pill, this did not produce a complete remission of migrainous headaches in all cases.

Among the 75 patients in the second group, 37 reported a deterioration in their migraines that took the form of an increase in either frequency or severity or both.

A high proportion also noted a distinct change in the pattern of their attacks. In a few patients, focal symptoms accompanied the migrainous headaches for the first time.

Twenty-nine patients reported no change in the pattern of their migraine and nine reported a distinct improvement, especially in the degree of severity.

Opposite Results Reported

In the discussion following delivery of Dr. Carroll's paper, Dr. Per Olof Lundberg of Sweden pointed out that he had achieved opposite results to those of Dr. Carroll in a study on a larger, nonselected series.

Whereas Dr. Carroll's patients came from headache clinics, Dr. Lundberg's patients were taken from a contraceptive pill clinic.

Dr. Lundberg, who is Assistant Professor of Neurology at the University Hospital in Uppsala and president of the Swedish Migraine Society, encountered 228 women who had previously suffered from migraine among a total of 1,676 requesting prescriptions for the pill.

Following consumption of various oral contraceptives for a median period of one year, 66 of the women who had had had migraine suffered still worse from the affliction, but 129 of them experienced an improvement. This indicated an over-all favorable effect from the consumption of oral contraceptives.

Since the number of different drugs used in Dr. Lundberg's study was so great, it was impossible for him to determine which constituents had the most favorable effects.

However he suspected that the high-progestogen pills were superior to the high-estrogen ones.

Armadillo May Provide Model For Investigation of Leprosy

Medical Tribune Report
Washington Bureau

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Leprosy has been transferred to a nine-banded armadillo, similar to one examined by Drs. Waldemar F. Kirchheimer (l.) and John Trautman, who is director of the USPHS Hospital, Carville, La.

Convulsions in Cholera Patients May Follow Magnesium Reduction

Medical Tribune World Service

VITTEL, FRANCE—The abrupt onset of convulsions in patients undergoing fluid therapy for cholera may be due to a sudden reduction in plasma magnesium, it was suggested here by Dr. Akio Kobayashi, specialist in nephrology and gastroenterology at the National Children's Hospital, Tokyo.

Dr. Kobayashi told participants in the first International Symposium on Magnesium Deficit in Human Pathology that hypomagnesemia had been found to occur consistently after the initial rehydration of cholera patients. This phenomenon reversed the hypermagnesemia which was observed prior to treatment. During the 24 hours which followed initial rehydration of the patients, the magnesium deficit continued to increase, with various choices of fluid and electrolyte treatment. Normal plasma values were found again in the course of convalescence.

He warned against the conclusion that the hypermagnesemia observed at the outset indicated a sufficiency of the Mg ion, since it was primarily a measure of the severity of dehydration. Thus, the administration of fluids revealed the underlying deficiency. Convulsions, coma and other central nervous system complications in cholera patients were especially common in the pediatric age range.

"Clinical experience has shown that intravenous magnesium sulfate is frequently efficacious in treatment of convulsions," Dr. Kobayashi said.

During an epidemic of El Tor cholera, plasma and fecal magnesium levels were measured in 59 patients admitted to the San Lazaro Hospital in Manila, the Philippines, he reported. The patients were randomly divided into four groups. The first group received both initial rehydration and maintenance therapy with lactated Ringer's solution. The second group was given lactated Ringer's solution for initial rehydration and thereafter received maintenance therapy with a solution including sodium, potassium, chloride and lactate. The third group had initial rehydration and maintenance treatment with physiologic saline. The fourth group was given lactated Ringer's solution with the oral administration of 10 per cent potassium citrate.

In all patients the plasma magnesium levels were elevated at the time of admission. The mean level in child patients from one to six years of age was 2.68 mEq./L. of plasma as compared with a normal level for this age of 2.41 mEq./L. High concentrations were also found in all other age groups.

Three hours after rehydration was begun, Dr. Kobayashi said, the values were "drastically reduced under the normal in all groups . . . observation at the end of 24 hours showed further reduction of the concentrations."

The degree of reduction in plasma magnesium was greatest in the third group of patients, treated with physiologic saline and sodium bicarbonate. The deficit was greatest of all, following initial rehydration, in two children who suffered from convulsions.

■ ■ ■

Mass X-Ray Exam Seen More Useful Than Symptomatology in Lung Cancer

Medical Tribune World Service

ROME—Mass x-ray examination in East Germany has proved "two or three times more effective" than diagnosis by symptoms in the detection of lung cancer, according to Dr. H. Berndt, of the Robert Rössle Clinic, Institute of Cancer Research, East Berlin.

Similarly, the five-year survival rate is two or three times as high in lung cancer detected by radiologic screening as in lung cancer diagnosed by symptoms, he said.

"Mass x-ray examination detects peripheral cancers and has convinced us that most central cancers begin in the periphery of the lung and grow into the hilus structures later," Dr. Berndt told the third International Seminar on Prophylaxis and Prevention of Cancer. "Resection rate in detected lung cancer is very much higher than in symptomatic cancer."

He said that about 10,000,000 persons are screened annually in East Germany and about 40 per cent of all lung cancers are detected.

"Immediately after the end of the war, mass miniature radiography was introduced as a tool for control of tuberculosis," he said. "At present, about 85 per cent of the adult population are examined annually."

Dr. Berndt said that of the 10,000,000 screenings films examined annually, about 8 per cent are considered as abnormal.

"By comparison with the radiographs of the preceeding examinations, the number can be reduced to about 80,000," he said.

Only 30% of the Physicians In Israel Smoke Cigarettes

Medical Tribune World Service

JERUSALEM—Only 30 per cent of all Israeli doctors smoke; another 30 per cent have stopped smoking; the rest never smoked. These findings emerged in a survey by the Ministry of Health.

Of those physicians who still smoke, two-thirds said they had tried to give up the habit and had failed. Some 70 per cent of the nonsmokers thought the medical profession should set an example by not smoking. Only 55 per cent of those who had stopped shared this view, as did only 34 per cent of those who still smoke.

A Briefing in Manila

WHO Photo

Yellow fever is extremely rare in Asia, but health authorities remain extremely wary because the Aedes aegypti mosquito has a wide distribution. In Manila, Aamador Corcego (r.), of the Philippines Quarantine Service, apprises a physician of its characteristics.

Philippines Lacking MDs; Ceylon Acts on Shortage

Medical Tribune World Service

MANILLA—A "brain drain" is rapidly depleting the supply of physicians in the Philippines.

More than 9,320 practicing physicians have left the country, according to a study by Dr. José Cuyegkeng, executive director of the Association of Philippine Medical Colleges.

Of these, 5,720 are permanently lost, having established residence abroad with no intention of returning to their country.

The remaining 3,680 are temporarily out of the country and will eventually return, the study revealed.

COLOMBO—The Government has taken emergency steps to halt a serious loss of doctors to foreign countries. The action has been taken at a time when the country is facing the threat of a major outbreak of poliomyelitis, among other health problems.

The first measure was to impose an immediate and total ban on the departure of physicians to take jobs abroad. The only exceptions will be made for those who had signed contracts before May 12 of this year.

At the same time, Prime Minister Sirima Bandaranaike has directed an appeal to Ceylon's doctors already working in other countries to return.

Finally, the Government is considering the abolition of an examination given by the Educational Council for Medical Graduates that qualifies doctors for practice in the United States.

About 200 doctors—more than half the annual output of Ceylon's two medical colleges at Colombo and Peradeniya—left the country last year, an official told MEDICAL TRIBUNE.

More than 70 left during the first half of the current year, and there is a large backlog of applications.

It Is Still a Problem, But Tapeworm Rate Declines in Finland

Medical Tribune World Service

OULU, FINLAND—Two decades ago one in every five persons in Finland had tapeworm; now the rate has fallen to one in 20, but the worm still represents an important national health problem.

Changed eating habits and improved hygienic and sanitary conditions are largely responsible for the drop in the incidence rate. Details of the battle being carried out against diphyllobothriasis were given at the second International Symposium on Circumpolar Health here by Dr. W. Nyberg, of the Minerva Institute for Medical Research in Helsinki.

He said some worm carriers develop a manifest megaloblastic anemia now known to be a vitamin B_{12} deficiency state. Describing research into this condition, he said Diphyllobothrium latum acts on the B_{12}–intrinsic factor complex, releasing the vitamin from its bound form. Most of the liberated B_{12} is then taken by the worm and not the host. One in 50 worm carriers develops a manifest megaloblastic anemia and 51 per cent have abnormally low serum B_{12} values.

Although the detailed mechanism by which the worm splits the B_{12}–intrinsic factor complex is not known, there is some evidence that the worm contains an as yet unidentified factor capable of releasing the bound vitamin.

Dr. Nyberg described clinical studies in which radioactive B_{12} was given orally to tapeworm carriers. When a B_{12} absorption test was performed, it was found that both anemic and nonanemic worm carriers absorbed significantly less B_{12} than controls. This pointed to the fact that D. latum, even in nonanemic carriers, impairs the absorption of vitamin B_{12} by its host.

"The consequences of the latent B_{12} deficiency of nonanemic worm carriers are not yet fully understood," he declared, "but it is worth mentioning that some of these patients develop neurological eye lesions."

■

Swimming Pools Store Water In Kenya Cholera Emergency

Medical Tribune World Service

NAIROBI—Kenyan officials have hit on a new way of fighting cholera—by using portable swimming pools as emergency water tanks.

When the recent cholera alert began, portable pools were flown from Nairobi to many outlying areas where the inhabitants normally rely on rivers and lakes for their drinking water. Water was pumped into the pools, treated to kill bacteria, and then drawn off again through a plastic pipe for drinking and washing.

Water-borne infection dropped sharply in areas where the emergency tanks were installed, officials reported.

NEWS INDEX

CLINICAL NEWS NOTE: "Clinical experience has shown that intravenous magnesium sulfate is frequently efficacious in treatment of abrupt onset of convulsions in patients undergoing fluid therapy for cholera." (Dr. Akio Kobayashi, specialist in nephrology and gastroenterology at the National Childen's Hospital, Tokyo; see above.)

FEATURE INDEX

Coming next issue: see page 5

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Migraine Linked To Contraceptive In Some Women

Medical Tribune World Service

ELSINORE, DENMARK—Oral contraceptives can bring out a latent tendency to migraine headache in some young women, and the correlation is even more marked when there was a previous history.

Clinical evidence of this, including a danger of thrombosis with permanent damage to the nervous system, was presented here by Dr. J. Desmond Carroll, consultant neurologist at the Regional Neurological Unit, Guilford, Surrey, England.

Dr. Carroll based his findings on studies made on two groups of women taking oral contraceptive pills. The first group consisted of 215 patients who had attended his clinic over a period of three years and who, prior to taking the pill, had never complained of significant headache. The second included 75 consecutive patients at the migraine clinic in whom there was a typical history of migraine headaches before being put on the pill.

Two Headache Types Present

In all, 70 women (32 per cent) in the first group experienced headaches. These included 48 whose headaches were generalized and of a vague type and 22 (10 per cent) with lateralized headaches that were apparently of the vascular migrainous type.

"It is clear in this analysis," Dr. Carroll told an International Headache Symposium here held under the sponsorship of the American Association for the Study of Headache and the Danish Migraine Society, "that in 10 per cent of these patients the pill brought out an inherent susceptibility to migraine, but more often in those who had a family history of headaches or allergic disorders."

Despite the fact that many patients stopped taking the pill, this did not produce a complete remission of migrainous headaches in all cases.

Among the 75 patients in the second group, 37 reported a deterioration in their migraines that took the form of an increase in either frequency or severity or both.

A high proportion also noted a distinct change in the pattern of their attacks. In a few patients, focal symptoms accompanied the migrainous headaches for the first time.

Twenty-nine patients reported no change in the pattern of their migraine and nine reported a distinct improvement, especially in the degree of severity.

Opposite Results Reported

In the discussion following delivery of Dr. Carroll's paper, Dr. Per Olof Lundberg of Sweden pointed out that he had achieved opposite results to those of Dr. Carroll in a study on a larger, nonselected series.

Whereas Dr. Carroll's patients came from headache clinics, Dr. Lundberg's patients were taken from a contraceptive pill clinic.

Dr. Lundberg, who is Assistant Professor of Neurology at the University Hospital in Uppsala and president of the Swedish Migraine Society, encountered 228 women who had previously suffered from migraine among a total of 1,676 requesting prescriptions for the pill.

Following consumption of various oral contraceptives for a median period of one year, 66 of the women who had had had migraine suffered still worse from the affliction, but 129 of them experienced an improvement. This indicated an over-all favorable effect from the consumption of oral contraceptives.

Since the number of different drugs used in Dr. Lundberg's study was so great, it was impossible for him to determine which constituents had the most favorable effects.

However he suspected that the high-progestogen pills were superior to the high-estrogen ones.

Armadillo May Provide Model For Investigation of Leprosy

Medical Tribune Report
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The Consultant

Dr. Samuel J. Fomon
Professor of Pediatrics, the University of Iowa University Hospitals, Iowa City.

What's new and important in the field of infant nutrition?

IMPROVEMENTS IN THE HEALTH CARE of infants in at least the major segment of the U.S. population have meant that many physicians are no longer fully occupied with emergency management of life-threatening diseases such as whooping cough and diarrhea. It has therefore become feasible to turn our attention to possible later consequences of feeding during infancy. The questions now being formulated are enormously complex, and it would be unrealistic to anticipate that they will be satisfactorily answered within the next two or three years. Does intrauterine growth retardation influence the infant's potential for physical and mental growth? Do feeding practices in infancy contribute to the problems of obesity and atherosclerosis in the adult population? How should we define obesity in infancy? What is a physiologically sound definition of iron-deficiency anemia? I believe that these and similar questions represent the future course of research in infant nutrition in technologically advanced societies.

Dr. Fomon

In the past few years, however, we have become acutely aware of the existence of other, more immediate problems. With much of the U.S. population well-nourished and, in fact, quite many of them overfed, a minority of the population nevertheless appears to be suffering from various types of malnutrition. We need to determine the size of this group and to devise means of assuring adequate intakes of calories and individual nutrients.

What is your attitude toward breast feeding?

My bias leads me to believe that any breast feeding is better than no breast feeding—providing that the mother finds this method of feeding attractive. I do not believe that women in technologically advanced societies should be coerced into breast feeding. Until evidence to the contrary is presented, I am inclined to evaluate performance of formula-fed infants on the basis of performance of breast-fed infants. However, only about 27 per cent of U.S. infants are breast-fed for even a few days and only about 15 per cent for as long as two months.

Our studies indicate that breast-fed infants gain in weight and length less rapidly than do formula-fed infants. We suspect on this basis that formula-fed infants may be overfed. When a breast-fed infant ceases to suck and swallow, his mother will assume that he is satisfied. Happily, she does not know how much he has taken. The formula-fed infant, on the other hand, is commonly encouraged to drain the bottle.

Which infant feeding practices are likely to have later consequences?

One I have already mentioned is overfeeding. Various investigators have speculated that overfeeding during infancy results in formation of an excessive number of fat cells. It is possible, however, that the number of fat cells might be normal during infancy but that habits of overeating, carried over to adult life, would eventually be responsible for an increase in number and/or size of fat cells.

Another possibility is that an excessive intake of sodium during infancy may predispose to hypertension. High intakes of sodium might induce hypertension directly—as has been demonstrated with rats of certain hypertension-prone strains. Or, conceivably, feeding large amounts of salt might establish a craving for salt which would lead to large intakes throughout life and to subsequent development of hypertension.

In this regard, it is encouraging to note that during the past two years manufacturers of strained and junior foods have voluntarily decreased the sodium content of a number of these foods. Relatively high intakes of sodium may still be obtained by infants fed skim milk and/or large intakes of commercially prepared strained and junior vegetables and "dinners" and by infants whose mothers season their infants' foods with salt.

A third practice that requires scrutiny is the establishment during infancy of a pattern of three meals daily. Many parents appear to believe that the infant who eats three meals a day has achieved an important landmark in development. But animal studies provide rather convincing evidence that, at least in some species, consumption of frequent small feedings throughout the day is physiologically preferable to consumption of the same quantity of the same foods in one or two widely spaced meals. The meal-eating animals become obese, develop atherosclerosis, abnormal glucose tolerance, and heart disease. Thus, at least until more information is available on this point, urging infants and small children to adapt to a three-meal-a-day pattern seems unsound.

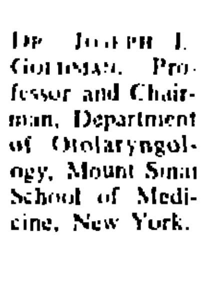
In order to combat widespread iron-deficiency anemia in the U.S., the Committee on Nutrition of the American Academy of Pediatrics has recommended that formula-fed infants receive commercially prepared, iron-fortified formulas until one year of age. Would you comment on this recommendation?

Iron-deficiency anemia is certainly prevalent among infants and small toddlers in the U.S., especially among those from low-income families and those of low birth weight. The most satisfactory postnatal approaches to prevention are provision of a daily intake of iron-fortified foods or of medicinal iron.

The iron content of unfortified foods is too low to permit achievement of recommended intakes except in the most unusual instances. Iron-fortified infant foods consist of formulas and of infant cereals. Several manufacturers have indicated that well over half of their sales of formulas consist of the products that are not fortified with iron—even though the same formula fortified with iron is marketed at the same price.

Iron-fortified formulas are well tolerated by infants, and I fully agree with the Committee on Nutrition that infants fed commercially prepared formulas should receive the iron-fortified products. Because iron can also be provided in infant cereals or in medicinal iron, I see no need to encourage feeding of iron-fortified formulas until age one year.

Next Tribune Consultant



Dr. Joseph J. Goldman, Professor and Chairman, Department of Otolaryngology, Mount Sinai School of Medicine, New York.

...and some questions he will answer:

- Comment on the problem of auditory nerve deafness secondary to antibiotic therapy.
- Does any indication exist currently for the early operation of fenestration for otosclerosis?
- What are the indications for radiotherapy and for surgery in tumors of the larynx?

Chemical Test for Antidepressives To Be Evaluated by Units of HEW

Medical Tribune Report

ROCKVILLE, MD.—A study to evaluate a simple chemical test for assessing the potential efficacy of certain drugs proposed in the treatment of depression has been announced by HEW's National Institute of Mental Health and Health Services and Mental Health Administration.

The study focuses on monitoring the pharmacologic activity of the tricyclic drugs commonly used in treating depression. These include imipramine, amitriptyline, and others.

The project director is Dr. Seymour Rosenblatt, of the Mount Sinai School of Medicine, New York. He says that a better understanding of the pharmacologic activity of these tricyclic antidepressants could lead to furthering "our understanding of some of the biochemical aspects of depression." Therapists estimate that between 4,000,000 and 8,000,000 Americans are in need of professional care for a depressive illness at any given point in time.

The test being studied consists of administering a small tracer dose of norepinephrine and determining the relative distribution of nonoxidized amine (N) and oxidized (O) metabolites (N/O ratio) in a urine specimen 12 to 20 hours later.

Considered relatively simple, this test has been confined largely to research use, but according to Dr. Rosenblatt it is easier and provides more precise data than the blood tests now used.

Previous research has implicated norepinephrine as a possible factor in depression. The illness has been associated with a deficiency of the transmitter hormone in the central nervous system. The tricyclic drugs may be effective against depression because they somehow correct an error in central nervous system functioning that too rapidly depletes the available supply of norepinephrine.

Specifically, Dr. Rosenblatt will study to what extent the N/O ratio in urine correlates with patient improvement, whether or not pretreatment N/O ratios may indicate if a patient will do better on other than a tricyclic drug, and whether or not the ratios will allow an early evaluation in the patient's treatment of the efficacy of a particular tricyclic drug.

COMING NEXT ISSUE

- **Exercise**
  A program is recommended to prevent heart disease.
- **'Barefoot doctors'**
  Providing diligent, frugal medical service in China.
- **Abortion**
  Liberalized law in Kansas results in legal complications.

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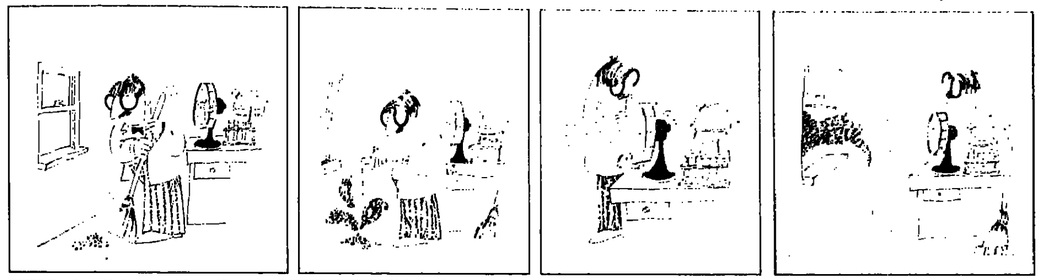
See next page for brief summary of Prescribing Information.

Clinical Trials **by Oldden**



Cendehill Rubella Vaccine Held Most Suitable in Fertile Age

Continued from page 1

Jamaica 46 per cent of females in the childbearing age are seronegative, and in Hawaii susceptibility in adult men and women has varied from 25 to 50 per cent.

"The pockets of unusually high rubella susceptibility among women in the childbearing age groups naturally represent special problems to the health authorities in those areas," Dr. Gold said. "Some—and I believe rightly so—have undertaken selective rubella vaccination of susceptible adolescents and young adult girls."

Dr. Gold noted that clinical trials of rubella vaccine on mature women in the United States and Europe have been in most cases limited to the Cendehill vaccine. Experiments carried out on approximately 800 susceptible women have shown a seroconversion rate ranging between 97 and 100 per cent and an incidence of joint reaction, usually mild arthralgia, of 6 per cent.

In studies conducted by Dr. Gold's group, the incidence of arthralgia in 115 susceptible female subjects who received Cendehill vaccine was 7.8 per cent, compared with 4.7 per cent in seronegative placebo-inoculated women. The incidence of arthritis was even lower—1.7 per cent in seronegatives receiving vaccine and 0.9 per cent in the seronegative placebo group.

10% of Joint Manifestations

The incidence of joint manifestations associated with the administration of Cendehill vaccine is approximately 10 per cent; with HPV duck embryo vaccine it is 38.5 per cent and with HPV 77 dog kidney vaccine 48 per cent.

A postpartum comparison study has reported essentially the same reaction rate for Cendehill and HPV 77 vaccines, but joint swelling, limitation of motion, and pain of longer duration were found with greater frequency in susceptible HPV recipients.

Commenting on postpartum studies in the United States, he reported that approximately 400 women have been vaccinated and seroconversion rate was 95 per cent.

Hormonal or other physiologic changes that occur during the postpartum period do not produce undesirable side effects and do not interfere with the rubella antibody response.

Dr. Gold said he was aware of approximately 38 cases of clinically normal children born to women who received rubella vaccine shortly before or during early pregnancy.

The infants had a negative virus workup, and their sera were negative for IgM.

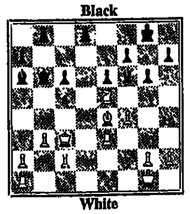
He noted that the risk to pregnant women is much lower from vaccine virus than from the wild strain and added there is a possibility there may be a difference in risk among the different vaccines.

HI antibody in children and adult women following Cendehill vaccination is found quite early. Of those tested by Dr. Gold's group, 96 per cent of those tested between the 20th and 24th days seroconverted, as did 97 per cent of those tested between the 25th and 29th days.

Early seroconversion after vaccination has also been noted with HPV 77 dog kidney vaccine, but HPV 77 duck embryo vaccine appears to produce some delay in detectable antibody. Only 78 per cent of 49 susceptible women developed antibodies by the 28th day of a recent series of tests, Dr. Gold said, although all had antibody by the 56th day.

Chess Problem

Black



White

This position arose in a game between the Soviet masters Kaminski and Osnos. White has just played P-QN3 and seems safe enough despite two separate pins to combat. How did Black continue? See page 17.

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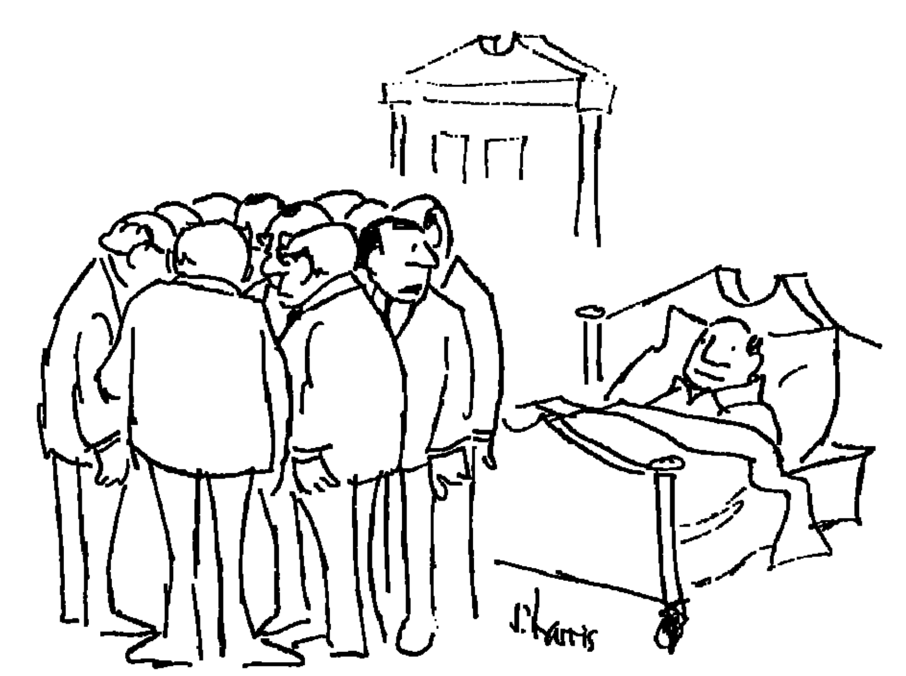


"But why on earth, Mr. Fobber, would you want an 11th opinion?"

On the Free Press

THE HEART of the Bill of Rights, as noted by Senator Ervin of North Carolina, is the First Amendment. That amendment guarantees "Congress shall make no law . . . abridging freedom of speech, or of the press." In the 18th century, speech went as far as the voice could be carried by sound waves but the press included newspapers, books, fliers, bills, and other documents. Today the means of communication are broader and extend to mass media, such as radio and television, and to specialty publications of far more limited distribution, such as MEDICAL TRIBUNE.

In espousing the freedom of communication, our First Amendment makes no distinction among media nor does it make any reference to the media's financial structure. In effect, it is an amendment that secures freedom of communication, and, as recent events have shown, that freedom of communication is sacrosanct also for radio and television; it must extend, as well, to all arms of the press, including controlled (free) circulation publications whose financial viability depends on advertising. At this time, it turns out, the dependence on advertising for viability is not limited to controlled circulation publications alone.

In a recent article on the editorial page of the *Washington Post*, Richard Harwood reported that the *Post's* subscription and newsstand income last year amounted to no more than $13,000,000, while its total income was $77,000,000, with a profit of $9,000,000. The cost of the blank paper alone on which the newspaper was printed came to $20,000,000—greater by more than a half than all the subscription and newsstand income. Said Mr. Harwood, "It was the advertisers who kept us alive and prosperous; they spent $64,000,000 for space in the *Washington Post* last year. Without their dollars we could not survive in our present form and that is true of every daily newspaper in America." The distinction between free circulation media—and that includes television and radio (also part of the *Washington Post* communications complex) as well as controlled-circulation newspapers—and the so-called subscription publications is neither real nor even academic.

Those who insist that advertisers "call the tune to which the American press dances" and that our media are controlled by vested interests must acknowledge that there are a host of others with "axes to grind." There are professional bodies, public figures, and even individual scientists and physicians who, by reason of personal conviction or, sometimes, for personal prestige, seek wide dissemination of their views and opinions, whether generally accepted ones or highly controversial. There are reporters, whose advancement may seem to rest on the ability to produce exciting coverage; columnists, whose syndication and financial reward may be increased by sensationalism; even editors, necessarily interested in circulation figures that may be altered by the manner in which news is handled. In the light of these disparate interests, how can our organs of communication remain truly free? That is possible only when freedom is linked with responsibility.

MEDICAL TRIBUNE, as a unit of the medical press, has from the first day of publication refused tobacco and liquor advertising; this was done voluntarily, simply out of a sense of medical responsibility. On the other hand, other publications that frequently attack the medical press see no inconsistency in carrying such attacks sandwiched between pages of cigarette and alcohol advertising. We trust that a recognition of the responsibility of the press will lead the print media to a voluntary assumption of the course of action now legislatively imposed on radio and television in regard to cigarette advertising.

The question of what advertisements a newspaper carries, however, is secondary to the integrity of its news columns and editorials. It is our belief that, as in the *practice of medicine, the integrity of the* American press is best assured by the ethics and principles of professionals—the ethics and principles of reporters, of columnists, of editors, and of publishers.

Underwater Swimming and Hypoxia

CLINICAL QUOTE: "Loss of consciousness during underwater swimming can occur when the swimmer is trying to set a record for distance and time. Invariably, the subject voluntarily hyperventilates before the swim. Loss of consciousness occurs with little or no warning, and the subject may continue to swim for a time despite such loss. People watching often do not realize that the swimmer is in trouble until final collapse. Death is a common result. The breaking point signal occurs even if he is exercising. . . . When exercise is combined with the breath hold following hyperventilation, the partial pressure of oxygen decreases even faster and hypoxia is quite easy to produce . . . and occurs with little or no warning." (Dr. Albert B. Craig, Jr., Associate Professor of Physiology at the University of Rochester School of Medicine and Dentistry; see Sports Report, page 23.)

National Health Insurance

Editor, MEDICAL TRIBUNE:

I have two comments on your edition of March 17 necessary for clarification of editorial and bureaucratic welfare state thoughts expressed therein.

The first is directed to your presumption that national health insurance is the only prospect for future medical practice. To this cliché, if enough physicians take the trouble to study the results of socialized medicine in other countries, their vociferous answer would be "No." In that case the "inside" promulgators of this inferior type of medical care would be stopped by a lack of physician participation, and taxpayers would be spared another federal boondoggle.

The second comment is directed to the Nixon health message that would fritter away *more taxpayers' money on HMOs*, subsidized health insurance, a stacked malpractice insurance commission, and further subsidized medical students and colleges. All of these suggestions are but variations of the Altmeyer, Cohen, Falk efforts to socialize medicine for the past years and are in total violation of the oath of office pledged by Nixon.

Since your editorial implies acceptance of bureaucratic buncombe for the practice of medicine, I suggest that you review the effects of Federal interference in the areas of farming, labor, housing, welfare, communications, and transportation. We are now paying for those mistakes, and many more, to the tune of more debt than all the rest of the nations in the world.

A. G. BLAZEY, M.D.
Washington, Ind.

Sex in Schools

Editor, MEDICAL TRIBUNE:

Direct experience with sex education programs reveals that sex courses provide the same type of information that overwhelms the child from the pornographic media. Because teachers act as parent substitutes, what the student learns is usually accepted as correct sexual information. The same material presented in under-the-counter magazines is frequently regarded as fantasy. Consequently, the results from schooling are more serious.

School teachers presiding over coeducation sex classes cannot correctly develop a child's sexuality. Indoctrination with sexual knowledge . . . is by no means a prerequisite for a normal sexual development affording an appreciation for *mature* heterosexuality. Nor is knowing about intercourse and genital anatomy a means of preventing sexual maladjustments. Similarly, textbook sex information is not needed for a child's sexual maturation and, in fact, interferes with natural responses to childhood sensual impulses.

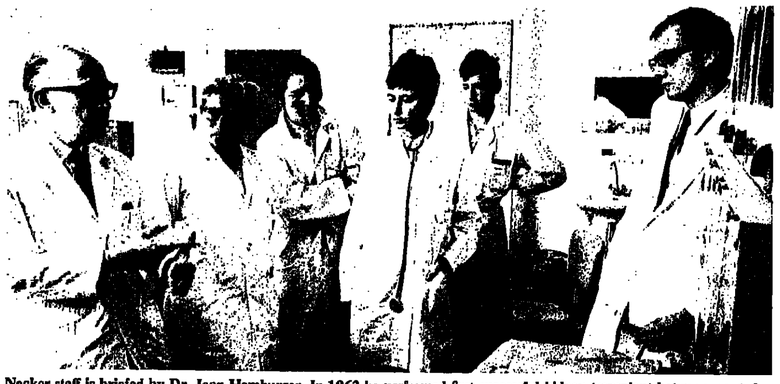
Only parents or those responsible for a child's total care can, in reality, influence the child's latent sexual instinct and sexual growth. Through child-parent relationships the young person learns that physical love is inseparably entwined with affectionate love. By example the mother and father show that sex is a one woman–one man affair. . . . Civilized societies derived from family life are entirely dependent on maintaining the intimate nature of sex. Only in a horde culture can sex be accepted as an entirely open matter, freely exposed.

Group participations in sensual sex, whether by means of actual sex acts, through the use of the pornographic media, or with the help of classroom programs, are contrary to the normal *intimate* nature *of sexuality. Anyone responsible* for teaching people how to have intercourse should be aware of this intimacy. However, sex educators seem to ignore the unnaturalness of learning about sexual experiences in the schoolroom. In this attitude they are bolstered by some modern-day psychiatrists, who have been trained in the peculiar setting we call the psychiatric hospital. These teachers and psychiatrists proclaim intimacy is not an integral part of the sex instinct. They say intimate feelings are reflections of "hang-ups" due to the rigidity of society's established codes.

To substantiate their view, they often cite the "scientific" studies of university sex professors. The published words of these academicians, devoid of any real medical experience, are derived from their note jottings taken while they watch male and female "volunteers" perform sex acts (Masters and Johnson, *Human Sexual Response*). From such data the sex scientists adduce, for their worshippers of scholasticism, what sex is all about. However, observations obtained from everyday clinical practice and judgments based on reason and personal introspection attest to the truth of Freud's teaching that intimacy is an inborn part of human sexuality. (Standard Edition of Complete Psychological Works of Sigmund Freud, Hogarth Press). . . .

Because I have testified as an expert witness in court cases involving libertine sex programs, I have had an opportunity to examine a significant number of sex curricula used in public schools. I find that though the courses make a pretense of teaching morality, invariably family values based on Judeo-Christian ethics are undermined and students are encouraged to set up their own standards devoid of sexual sublimations. . . .

MELVIN ANCHELL, M.D.
Los Angeles, Calif.



Necker staff is briefed by Dr. Jean Hamburger. In 1962 he performed first successful kidney transplant between nontwins.

Rat receives kidney transplant. Wor

Paris Center Treats and Studies Kidney Disease

Its Three Units Have Total of 76 Beds

Renal blood flow in rabbit is measured, using radioactive gas method.

ADVANCED MEDICAL CARE, research, and training facilities are brought together at the Hôpital Necker, in Paris, to focus on the problems in the treatment and study of kidney disease.

The constant cross-exchange between applied and basic researchers have resulted in numerous innovations, including a presterilized, disposable artificial kidney and the technique of cytoadherence, a highly sensitive test for checking donor compatibility.

The patients in Necker's three units, which total 76 beds, receive benefits of latest facilities. Special patients stay in a regulated antiseptic environment and communicate with visitors only via an intercom. Approximately one-fifth of Necker's patients participate in the home dialysis program, whose goal is to allow them to lead as normal a life as possible.

Many physicians from France and other countries attend the regular seminars and conferences or obtain fellowships for study at the center.

Patient is aided by wi
a two-month training c
treatments, which is

Assay: Specificity of detection test for cancer of the rectum and colon, developed by Canadian Dr. Phil Gold, that measures carcinoembryonic antigen levels in the blood, is being evaluated by Tufts–New England Medical Center researchers under a new National Cancer Institute grant. Above, Drs. Robert Schwartz (c.), James Patterson (r.) and Larry Nathanson.

A Taste of Medicine: Medical
cine, Houston, have piloted a 10-week work
dents and recent high school grads. It was desi
and lab work and aid in preparing them
requirements. Above, Carla Whittaker (l.)

Personality and Coronary Heart Disease

Although coronary heart disease (CHD) is the leading cause of death in the United States, its pathogenesis remains a complex, multifactorial puzzle. Certain physical factors have long been suspected. But, on the basis of recent prospective investigations,' the impact of environmental stress on certain personality types may turn out to be as crucial as the presumed physical causes of CHD.

The following discussion presents some of the clinically significant findings that have emerged from recent extensive studies on this aspect of the problem.
A consensus, however, awaits the outcome of further definitive work.

Interplay of endogenous behavioral traits and exogenous pressures

Rosenman and his associates[2,3] have done a prospective study involving more than 3500 subjects at risk for occurrence of coronary heart disease. Their findings suggest that exhibition of a specific, overt behavior pattern (superimposed on additional prognostic risks such as hypertension and/or abnormal lipoprotein pattern) "...may bear a dominant pathogenetic relevance to the increasing coronary morbidity of the middle-aged American male."[2] According to these clinicians, a distinctive pattern of recognizable personality traits can usually be found in the individual who ultimately incurs the disease. The subjects of their study exhibited two dissimilar types of personality and behavior: Pattern Type A and Pattern Type B.

Pattern Type A is characterized by "...excessive drive, aggressiveness, and ambition, frequently in association with a relatively greater preoccupation with competitive activity, vocational deadlines, and similar pressures."[3] Subjects in this group usually exhibit an enhanced sense of time urgency. Pattern Type A tends to speak frequently, rapidly, explosively. They are given to sudden gestures such as fist-clenching, desk-pounding, taut facial grimaces. Their movements are generally rapid, reflecting chronic restlessness, impatience and urgency.[2] Pattern Type B, on the other hand, is characterized by a relative absence of the emotional interplay and personality described for Pattern Type A.[3]

The results of the study by Rosenman and his associates demonstrated a significantly *higher incidence of new coronary heart disease in the group designated as Type A.* The authors emphasize, however, that occlusive CHD probably results from a complex interaction of many factors; that it was only when the Type A behavior pattern occurred in association with other prognostic factors such as elevated diastolic pressure or serum lipids or both, that the personality pattern had prognostic significance. For Pattern Type B, on the other hand, even when the other prognostic risks were present, the incidence of new CHD was no greater than that observed for the total subject population at risk. These findings appear to have prognostic relevance.[3]

Concerning the stressful effects of a sense of time urgency, Pepitone[4] has observed: "The existence of a deadline is commonly identified as a source of stress." He notes a report of some years ago "that tax accountants have high levels of serum cholesterol and thrombin as the deadline approaches for filing returns."

An "ideal" coronary candidate?

An attempt to identify the "ideal" candidate for heart disease in terms of a general stress model was outlined in a recent workshop on social stress and cardiovascular disease.[5] "The ideal candidate...would be an individual who has been subjected to many stressful events, internal or external, which have high valence for him; who is anxious and does not overtly express his aggression or frustration; who has to mobilize a great amount of effort to handle these stressful events or who feels that he is helpless to do anything about them."

Smoking and CHD: anxiety a common denominator

Thomas[6] has recently called attention to an observed relationship involving anxiety, cigarette smoking and coronary disease. She points out that this is not necessarily a simple cause-and-effect relationship, but possibly could be explained on the ground that cigarette smokers are more often the precoronary type than nonsmokers.

Is there more than one "coronary personality" type?

Certain recent studies[3,7,8] have suggested that there may be *more than one* major coronary personality type with differing behavioral patterns. In one study, exploring differences between coronary and noncoronary patients, it was found that the coronary group contained two subgroups, one that was described as self-centered, unstable, passive-regressive, mother-oriented—with coronary attacks occurring early in life—and the other almost opposite in character, described as sociocentric, controlled, striving, father-oriented—with coronary attacks occurring relatively late in life. The former group was generally low in ego strength whereas the latter showed considerable ego strength. The mother-oriented group demonstrated a high level of anxiety in connection with their "dependent self-image and life situation." *Both* groups, however, "had failed to establish their own identities in a satisfactory manner."

In discussing the prospective study of Rosenman and his group,[3] which strongly related Type A behavior to CHD, Thomas[6] notes that a substantial number of Type B subjects "...*did* develop coronary disease..." though less than those with Type A behavior pattern.

In a critique of studies on the current concept of the "coronary-prone" individual, Mordkoff and Parsons[9] conclude, in part, that the search for a *unique* personality configuration associated with coronary disease has been "disappointingly unproductive," and that insufficient attention has been paid to age, sex, socioeconomic status (SES) and other criterial attributes. They call attention, however, to the fact "...that several sources of evidence have demonstrated that psychological stress is implicated in CAD [coronary artery disease]"; and to the "important empirical data" of Friedman and Rosenman, "...which await a systematic theoretical treatment." Finally, they suggest: "It is most probable that the well-established hereditary determination of CAD...and sociocultural factors will be the vehicles through which the contribution of

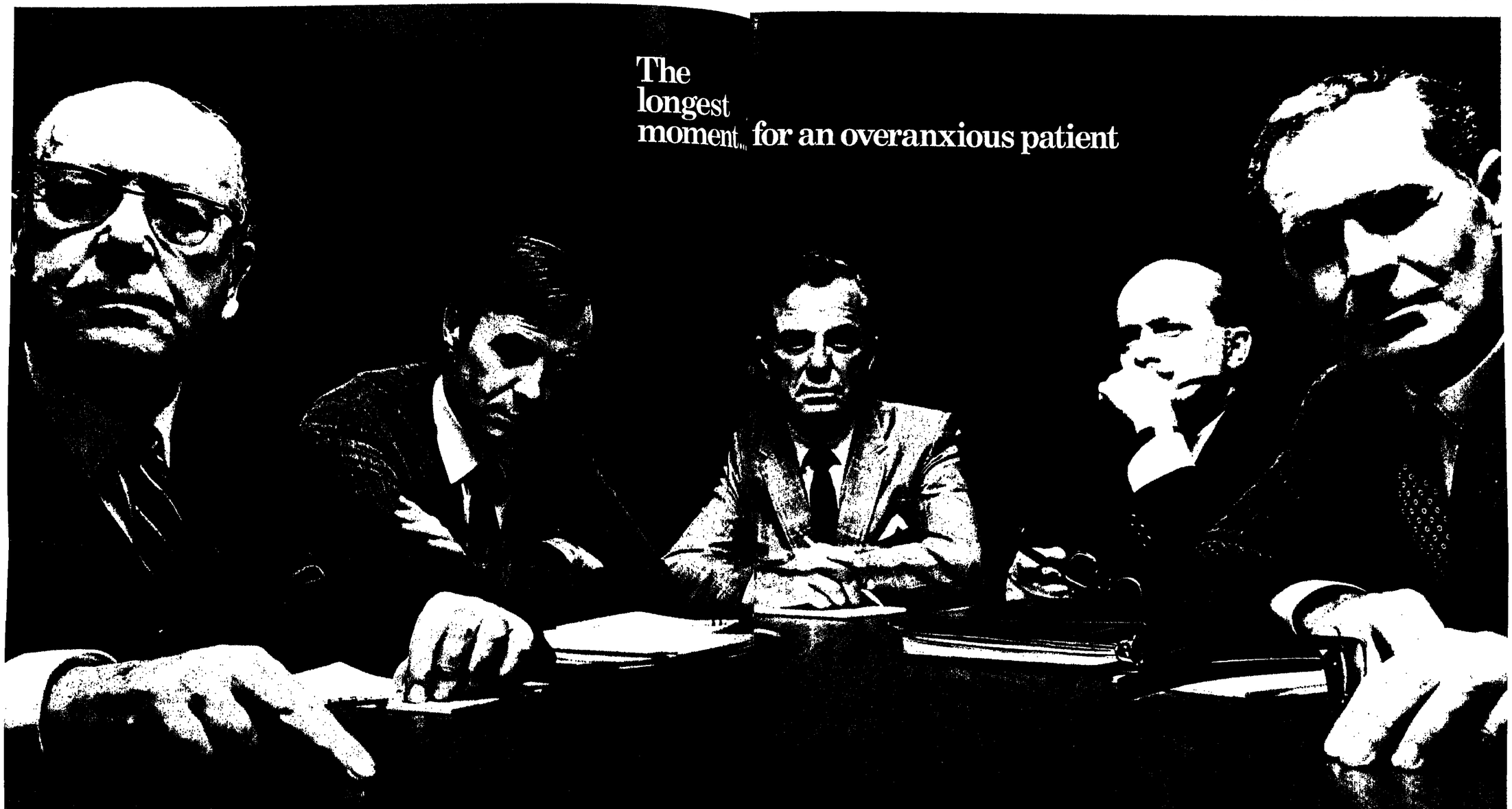
This discussion is intended as an informative review only, and is not meant to imply a recommendation for any drug or other specific therapy by its content or by the authors cited.

Pattern Type A is an aggressive individual who must assert himself as one who deserves recognition and good service, whether from fellow-workers or a waiter. Pattern Type A has been associated with a significantly higher incidence of CHD as compared to other patients with the same coronary risk factors.

Pattern Type B may be too self-effacing to stand up for his rights even in small matters. He is the sort that often lets himself get "beaten out" of his place in line or will yield the cab he has hailed to someone more aggressive. The incidence of CHD for Pattern B is no greater than that for the general at-risk population.

Please see page 8 of this advertisement for important prescribing information.

The longest moment... for an overanxious patient



At moments of high importance to the individual, intense anxiety can paralyze positive response. It is a truism that adequate preparation contributes to effective task performance. Even so, the anxiety-ridden individual—however capable—and prepared—is not immune to apprehensive imaginings or excessive emotional tension. When the stakes are high, when the potential threat to status and self-esteem is considerable, anxiety must be kept at low levels to assure optimal mental function.

In a recent conference on psychological stress, one participant* distinguished between "coping" and "defense." *Coping*, in his view, "refers to the instrumental behavior and instrumental capacities in meeting life demands and goals. It involves the application of skills, techniques, and knowledge that a person has acquired." *Defense*, on the other hand, "refers to the manner in which a person manages his emotional and affective states when discomfort is aroused or anticipated." Mastery in a given situation depends to a large extent on the person's ability to mobilize his needed efforts, on his skill in dealing with tasks and people and on his own assessment-perception of his abilities. Uncertainty in this regard can quickly lead to the immobilizing confusion engendered by extreme anxiety.

Librium (chlordiazepoxide HCl)

- can provide prompt antianxiety action.
- can be useful for undue anxiety associated with a wide range of functional and organic disorders.
- generally does not unduly interfere with mental acuity, on proper maintenance dosage.
- has demonstrated a wide margin of safety in more than eleven years' clinical use. In general use, the most common side effects reported have been drowsiness, ataxia and confusion, particularly in the elderly and debilitated. (See full prescribing information.)

*Mechanic, D.: Invited commentary, in Appley, M. H., and Trumbull, R. (eds.): *Psychological Stress: Issues in Research*, New York, Appleton-Century-Crofts, Div., Meredith Publishing Co., 1967, pp. 201-202.

for moderate to severe anxiety that can block effective response

Librium® 10 mg (chlordiazepoxide HCl)

1 or 2 capsules

t.i.d./q.i.d.

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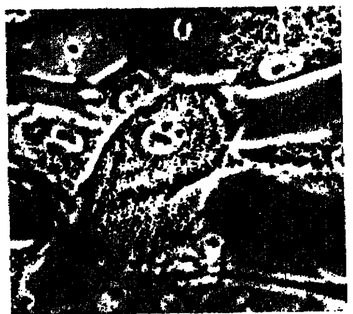
References: 1. Schallek, W., *et al.: Arch. Int. Pharmacodyn., 149*:467, 1964. 2. Himwich, H. E., *et al.: J. Neuropsychiat., 3*(Suppl. 1):S15, 1962. 3. Morillo, A., *et al.: Psychopharmacologia, 3*:386, 1962. 4. MacLean, P. D.: *Psychosom. Med., 17*:355, 1955. 5. Morgan, C. T.: *Physiological Psychology*, ed. 3, New York, McGraw-Hill Book Co., Inc., 1965. 6. Randall, L. O., *et al.: J. Pharmacol. Exp. Ther., 129*:163, 1960. 7. Miller, L. C., and Tainter, M. C.: *Proc. Soc. Exp. Biol. Med., 57*:261, 1944. 8. Zbinden, G., *et al.: Toxic. Appl. Pharmacol., 3*:619, 1961. 9. Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 10. Ulett, G. A., *et al.: J. Neuropsychiat., 5*:558, 1964. 11. Hollister, L. E., *et al.: Psychopharmacologia, 2*:63, 1961. 12. Bibliography and References available on request from Roche Laboratories. 13. Rickels, K., *et al.: Med. Times*, 93:238, 1965. 14. Tobin, J. M., *et al.: J.A.M.A., 174*:1242, 1960. 15. Jenner, F. A., *et al.: J. Ment. Sci., 107*:575, 1961. 16. Robinson, R. C. V.: *Dis. Nerv. Syst., 21*(Suppl.):43, 1960. 17. Rose, J. T.: *Amer. J. Psychiat., 120*:899, 1964. 18. Hines, L. R.: *Curr. Ther. Res., 2*:227, 1960. 19. Gibbs, F. A., and Gibbs, E. L.: *J. Neuropsychiat., 3* (Suppl. 1):S73, 1962. 20. Kaelbling, R., *et al.: J.A.M.A., 174*:1863, 1960. 21. Cacioppo, J., *et al.: Amer. J. Psychiat., 117*:1040, 1961.

gs is also carried out.

rating dialysis machine. He had taken officials expect the present rate of home .0 per cent, to double in five years.

ents at Baylor College of Medi- tudy program for college stu- expose participants to clinical t medical school admissions chal Young check an infant.

Liver culture after 20 days. Bundles of palisading cells radiate from liver explant (dark area) and form monolayer.



Most common cell type seen in primary liver cultures.

The Adult Human Liver Is Studied in Tissue Cultures

ADULT HUMAN LIVER biopsy specimens were cultured to observe growth and ascertain whether the in vitro characteristics of these cells were related to histologic lesions in the patient's organ, by Charles Demoise and Arthur Falek, both Ph.D.s, and Dr. John Galambos, at the Emory University School of Medicine.

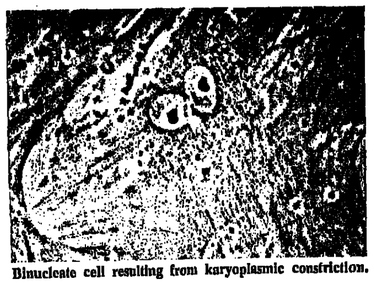
Results indicated that cells obtained from persons with alcoholic or viral hepatitis had higher growth and survival rates than those cultured from morphologically normal or fatty livers. In addition, cultures obtained from normal cells were more difficult to subculture.

DR. FALEK

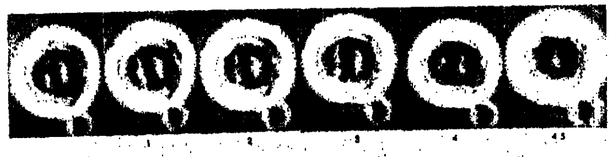
DR. DEMOISE

DR. GALAMBOS

Metaphase stage, apparently normal, of cell occurring in 200 mg. ethanol per 100 ml of culture media.



Binucleate cell resulting from karyoplasmic constriction.



Sequence of liver culture cell in mitosis. Nine minutes elapsed from metaphase stage to daughter cell.

Hospital Society Backs President On Wage Freeze

Continued from page 1

"But it may mean a lot more than that after 90 days," Mr. Hahn added.

Even before the 90 days is up, however, he said, he is "sure that some hospitals will provide new services . . . and will have to price those services according to the rules set out by the Government." Rulings will also be required in some questions of salaries and house officer stipends, he said.

The A.H.A. registry lists more than 7,000 hospitals with nearly 3,000,000 employees, full- and part-time, in the U.S. The association said that the freeze halted some scheduled wage increases before they went into effect but in other "numerous cases the hospitals have already granted and paid" wage increases without yet implementing a rate boost.

For Wesley Memorial Hospital here the "bind" is not wages, its spokesman said, but a $1,000,000 electrical renovation contract plus about $750,000 to cover promised improvements in employee health and disability insurance and stipends for more interns. The hospital is a training facility for Northwestern University, which is asking a 25 per cent expansion in the intern roster next year and already has scheduled a 16 per cent expansion this year—"at $10,500 per intern," the spokesman said.

Costs Would Have Risen

The contracted expenses, construction and otherwise, were to have been covered at Wesley by a September 1 rate increase that would have raised the $66 per-patient daily cost in a double room to $77. In addition, Wesley employees were to get wage increases September 1. The freeze stopped both planned rises but not the previous contractual obligations.

Adding to the financial problems at Wesley is an empty bed situation due partly to the usual summer slow-down and partly to the fact that electrical work on the 16-story building requires removal of patients from an entire floor at any one time.

The hospital spokesman said the 12 per cent payroll cut was "in money, not people" and probably would affect fewer than 12 per cent of the 1,600 full-time employees.

An A.H.A. official said the Wesley Memorial situation might be "one of many" for which specific queries could be made at the Office of Emergency Preparedness. The A.H.A. role in liaison with OEP, President Hahn said, possibly would include such knotty questions as "utilization, which controls costs," and the processing of "complaints by patients."

Does Not Expect Complaints

Mr. Hahn said he does "not expect complaints from hospitals" during the relatively short period of the freeze. A.H.A. president-elect, Stephen M. Morris, president of Good Samaritan Hospital in Phoenix, Ariz., said he thought that "the OEP guidelines would be enforced voluntarily" because "so much public pressure would be engendered by a rate rise during the freeze.

However, said Mr. Morris, the costs of running a hospital will not be held down completely by the wage-price freeze and "readjustments will have to come" in the postfreeze period.

On the same subject, Elliot L. Richardson, U.S. Secretary of Health, Education, and Welfare, warned the A.H.A. in an address that "this is the time to face the fact that after 90 days it will not be desirable to return to 'inflation as usual.'" He urged health care leaders to use the time "to consider the steps it will take to reduce inflation in the future with as little Government intervention as possible."

Asked about the possibility of exempting hospitals from the freeze, Mr. Richardson told a new conference that it was "only fair that everyone should be included" during the first phase of the Administration's anti-inflation campaign.

Liver Scanning in Cancerous Held of Doubtful Specificity

Continued from page 1

for therapy or prognosis unless it is normal, the investigators said. A normal scan, they said, reflects a better prognosis and aids the clinician in his approach to therapy, especially if radical surgery is a consideration.

"An abnormal scan," they went on, "is nonspecific whether the abnormality is focal or diffuse; metastases may or may not be present. Liver function studies are even less sensitive and equally nonspecific with one exception. Where the alkaline phosphatase is markedly elevated, bone disease and biliary obstruction is excluded, and a focal defect is noted on the scan, the presence of hepatic metastases is virtually certain.

"Percutaneous liver biopsy or laparotomy and inspection are specific only when positive. Indeed, percutaneous liver biopsy or hepatic visualization at laparotomy will fail to detect tumor in 30 to 40 per cent of cases.

"These facts suggest an approach to the evaluation of the liver for metastases in cancer patients. An abnormal scan is an indication for liver biopsy. This may be done percutaneously or under direct visualization at peritoneoscopy. If a focal defect is present on scan, that area should be biopsied, if possible.

"If the biopsy is normal, a laparotomy with biopsy of visible lesions should be performed, but if no lesions are seen a generous wedge of tissue should be obtained. This approach would appear to offer the greatest opportunity of detecting metastatic hepatic disease."

No Prognostic Tie of Symptoms, Survival in Renal Cancer Seen

From Mass. General Hospital

▶ No significant prognostic relationship could be found between various presenting symptoms or laboratory abnormalities and over-all survival in a series of 309 cases of renal cell carcinoma surgically treated at Massachusetts General Hospital during a 30-year period, the meeting was told.

Division by pathologic stage correlated better with survival than did division by histologic grade, but both were important determinants in predicting prognosis of individual cases, according to Drs. Donald G. Skinner, Robert B. Colvin, Clinton D. Vermillion, Richard C. Pfister, and Wyland F. Leadbetter.

Grading was based solely on nuclear morphology in order to simplify it, they said. This method of grading had definite, although limited, predictive value within stages 1, 3, and 4, they found. Pure clear-cell carcinomas had a better prognosis than granular and mixed forms up to five years, and spindle-cell types had the worst prognosis.

Operative mortality in the series was 5 per cent, and over-all survival was 44 per cent at five years and 33 per cent at 10 years.

Excluding those patients with metastases present when first seen for treatment, five-year survival was 57 per cent and 10-year survival was 44 per cent, the physicians said.

> *When meditating over a disease, I never think of finding a remedy for it, but, instead, a means of preventing it.*
>
> Louis Pasteur (1822-95)
> Address to the Fraternal Association of Former Students of the Ecole Centrale des Arts et Manufactures, Paris, May 15, 1884.

Artificial Kidney Featured at State Fair

Central New York Regional Medical Program sponsored an artificial kidney exhibit at the N.Y. State Fair in Syracuse. (L. to r.) Cathie Smith, R.N., Jan McLeary, R.N., both of Johnson City, and Walter Curry, RMP teaching coordinator, man the equipment. They also distributed donor cards and transplant information. Officials estimate that there are 800 hemodialysis patients throughout the state.

Unit Traces Esophagus Cancer By Study of Alcoholic Drinks

Continued from page 1

in some parts of Russia than it is in Ceylon. Cancer incidence tends to make broad geographical patterns, but cancer of the esophagus tends to occur in what might be called spots."

The agency's liaison man is Dr. Janez Kmet, a Yugoslav physician. "The two areas of highest incidence in Europe are France and Switzerland, with France having the highest rate," he pointed out to MEDICAL TRIBUNE. "The age-standardized esophageal cancer mortality rate per 100,000 population per year for males in 1965-66 in France was 13.7 and in Switzerland 9.22."

The investigator noted, however, that rates for the 21 regions of France show that the male esophageal cancer mortality is by no means the same throughout the country but varies considerably from one region to another. The highest rates are in Brittany. Both maps bear a striking resemblance to maps showing alcoholism rates. A computer study has confirmed the relationship.

In the more detailed map, by small departments rather than large regions, there is a close relationship between deaths attributed to alcoholism and cancer of the esophagus and a much lower relationship between cirrhosis of the liver and mortality from cancer of the esophagus.

"We now know," said Dr. Tuyns told MEDICAL TRIBUNE, "that there is no department in France with a high rate of cancer of the esophagus that does not also have a high rate of alcoholism. But in some departments the rate of alcoholism is high but there is no notable increase in male deaths from cancer of the esophagus. This is true, for example, in the departments of the Ardennes, Haute Savoie, and Savoie."

In Poland, where cancer of the esophagus is not common, the national drink is vodka, which is simpler in composition than most other alcoholic drinks.

Beverages Collected

The IARC has now collected and bottled locally brewed beverages from Jamaica, Curaçao, Puerto Rico, Iran, Brittany, and Singapore. The contents of these samples will be tested for the presence of carcinogenic compounds, particularly nitrosamines, at the British Food Manufacturers' Industrial Research Association laboratories in Leatherhead, Surrey, under the direction of Dr. C. L. Walters.

In Europe, as in most but not all areas of the world, esophageal cancer is more prevalent in males than in females. For reasons not understood, the highest mortality for females in Europe does not occur in France, the country with the highest male mortality, but in Eire.

Many questions remain about cancer of the esophagus in Europe; why is it notably more common among males than females except in Finland and Northern Ireland (but where in some years women have had equal or higher rates) and in Eire, where the female mortality is rising and the male mortlity declining? And why in at least three countries—Denmark, Finland, and Switzerland—is there, as Dr. Tuyns puts it, "a decrease which may be considered as a real phenomenon?"

In Asia, IARC statistics indicate that there is an "esophagus cancer belt" stretching from north of Korea, crossing Mongolia as it moves west, and passing through a large part of the Soviet Union, including Turkmenistan and the Usbek Soviet Socialist Republic. It then moves further westward, through the northern part of Iran, and peters out around the border of Turkey. But along the southern tip of the Caspian Sea, yet very much in the "cancer belt," there is a small area of extremely low incidence, adjacent to an area of high incidence and less than 100 miles from an area of extremely high incidence. There is, in effect, an "island" of relative safety.

Wide Range of Incidence

A survey of the region beginning in July, 1968, and concluding in June, 1970, resulted in the establishment of annual incidence (simplified age-adjusted) for ages 35 through 64 in areas of Iran near the southern end of the Caspian Sea. These ranged from as high as 272.1 per 100,000 among males and 412.6 among females in some districts to as low as 18.6 for males and 6.6 for females in others.

Studies of difference in habits, and other factors, between high- and low-incidence areas are continuing. "Where a tumor is as frequent as cancer of the esophagus in Iran," Dr. Kmet commented, "it is probable that the environmental hazard is widespread. But the environmental hazard is not necessarily a specific carcinogenic substance. In the high-incidence areas there could be a general deficiency which predisposes the people to this kind of cancer."

Preliminary studies to determine the role of alcohol, tobacco, and opium in cancer of the esophagus in Iran indicate that such factors can virtually be ruled out, the investigators said.

An FDA Warning Asked on Toxicity Of Methotrexate

Medical Tribune Report
Washington Bureau

WASHINGTON—The Food and Drug Administration should warn the medical profession of the high toxicity of methotrexate—the potent anticancer agent that has found widespread use in the United States for psoriasis—according to Rep. L. H. Fountain (D.–N.C.).

The agency should also make it clear that use of methotrexate for psoriasis without an Investigational New Drug exemption causes the drug to be legally misbranded and jeopardizes its availability even for legitimate purposes, Mr. Fountain said in a letter to Dr. Charles C. Edwards, FDA Commissioner.

The chairman of the House Intergovernmental Relations Subcommittee of the Committee on Government Operations remarked that "the legal impact of the physicians' unauthorized use of approved new drugs does not seem to be generally known to the medical profession."

"Editorials such as that which appeared in the July 12, 1971, issue of the *Journal of the American Medical Association* serve to encourage the unauthorized use of drugs by stating that FDA's insistence upon INDs has no basis in law," he declared.

If FDA notified physicians that use of approved drugs for nonapproved purposes might have the effect of depriving all patients of these drugs, Mr. Fountain said, physicians would be encouraged to file INDs.

An explicit warning in the labeling against use of methotrexate for psoriasis except on an investigational basis would probably deter physicians from the improper use of this drug, he told Dr. Edwards.

Hope to Approve Labeling

At recent hearings, FDA officials said they hoped to resolve the methotrexate problem by approving some form of labeling for the use of the drug in psoriasis.

Mr. Fountain asserted, however, that "there still appear to be fundamental, unresolved questions concerning the safety of methotrexate for psoriasis which raise doubts as to whether the Food and Drug Administration can at this time draw any firm conclusions about the safety of such use."

The letter cited testimony before the subcommittee by Dr. Henry H. Roenigk, Jr., of the Cleveland Clinic department of dermatology, that the 25 deaths known to FDA from use of methotrexate in psoriasis represent a small portion of the actual number of fatalities, on the basis of his own experience and that of others whose work he has surveyed.

The problem of what to do about methotrexate, Mr. Fountain noted, is further complicated by the fact that the manufacturer, Lederle Laboratories, is requesting withdrawal of its supplemental new drug application for use of the product in psoriasis. The methotrexate situation, he charged, "is a classic example of FDA's failure to act early and decisively."

Smallpox Wanes in India

Medical Tribune World Service

NEW DELHI—The incidence of smallpox in India has dropped to the lowest level in history, the Government announced here. Complete figures for 1970 showed 10,055 cases and 1,805 deaths, compared with 19,120 cases and 4,154 deaths in 1969.

A typographic omission occured in a MEDICAL TRIBUNE report (August 18) listing the cost to physicians to enroll for home study tests and syllabus sets prepared by the American College of Radiology. To A.C.R. members the cost is $45; to nonmembers, $65; to residents, $35.

Cholesterol Held Essential As Nerve Impulse Mediator

Medical Tribune Report

UPTON, N.Y.—Cholesterol has been found to be essential as a mediator for the conduction of all nerve impulses throughout the body, according to a report from Brookhaven National Laboratory.

The finding was described as an unexpected result of the use of new cryobiochemical methods for tissue research pioneered at the laboratory by a group headed by Simon Freed, Ph.D. Dr. Freed officially retired in 1965 but remains active as a research collaborator in the laboratory's chemistry department and as a Research Professor at the New York Medical College.

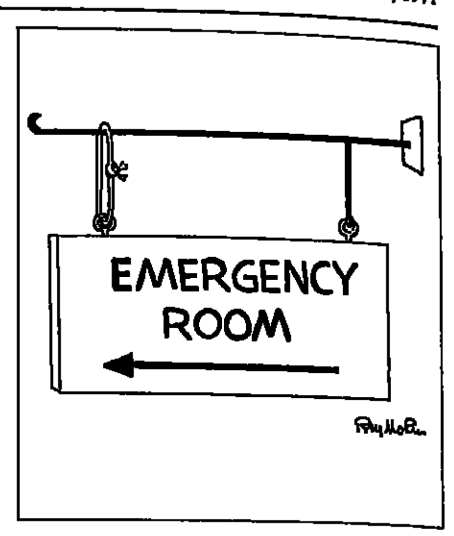
Combining research at both institutions, Dr. Freed, together with Dr. Tetsuya Noguchi, who is on leave from Keio University, Tokyo, developed the new method of cryoextraction-reconstitution for the study of nerve cell membrane enzymes. This is said to be the only known way to separate the fatty and protein components of enzyme molecules without destroying the enzymatic viability.

The membrane enzyme mainly studied was sodium-potassium-stimulated adenosine triphosphatase. It surrounds all nerve cells in the brain and elsewhere, mediates energy required for nerve conduction, and is essential for all activity of the nervous system, both from and to the brain, the Brookhaven report said.

The first step was to "instant-freeze" the brains of rats, obtained from Brookhaven's medical research center, in liquid nitrogen at −196° C. The temperature of the brain tissue containing the enzyme was then raised to −75° C. The lipids were then dissolved by a mixture of 50 per cent chloroform and 50 per cent methyl alcohol already at −75° C. The mixture was filtered at this temperature, allowing the dissolved lipids to pass through the filter while the proteins stayed behind in the residue.

The lipid extract was then fractionated into its various components and individually recombined at −75° C. with the protein component, which by itself is inactive as enzyme. It was found that only cholesterol restored virtually full enzymatic activity. Other lipid components, such as phosphatidyl ethanolamine, phosphatidyl serine, and phosphatidyl chlorine, were about one-fourth or less as effective as cholesterol in the restoration of enzymatic activity.

Certain well-known cardiac glycosides are specific enzyme inhibitors of sodium-potassium–stimulated adenosine triphosphatase, the Brookhaven report said. These glycosides contain, as part of their molecules, structures similar in size and shape to cholesterol. The investigators postulated that these glycosides act as inhibitors because they can compete with cholesterol and displace it from its site on the enzyme molecule.



Ultrasound Device Detects Pre-eclampsia Better Than Nurses

Continued from page 1

nurses tended to read any difference slightly low, with a standard deviation of differences of 11 mm. Hg, compared with the physicians' standard deviation of 8 mm. Hg.

In discussing the trial, Dr. Godette said:

"Although no one knows the etiology of toxemia of pregnancy, it is well established that this disease affects the vascular system early in its course and may indeed be a vascular disease. At any rate, it exhibits vascular manifestations which might be detected in the early observation of blood-pressure changes, as reflected by vascular alterations, with the use of an indirect occlusive blood-pressure measurement, relying upon the behavior of an artery as detected by ultrasonic energy."

Benign Condition Seen to Have Fatal Ability in Fibroid Case

From University of California

► A "benign condition with a fatal capacity" was reported by a Los Angeles gynecologist in detailing two cases of massive fibroids.

In presenting his paper, entitled "Do Fibroids Kill?" Dr. Leroy R. Weekes, Clinical Professor of Obstetrics and Gynecology, University of California, described first the case of a widow, 59, admitted in a semistuporous, confused, and dehydrated condition.

Her abdomen was markedly distended, with a large mass extending from the symphysis pubis to 6 cm. below the xiphoid process. The mass was "firm and irregular, having the physical characteristics of a massive fibroid."

The patient experienced several toxic episodes characterized by high fever, tachycardia, and ST and T-wave ECG changes, compatible with coronary artery disease.

At surgery, Dr. Weekes and his colleagues removed "a massive fibroid with tubes and ovaries which practically filled the abdominal cavity," the physician reported. "Pathologic analysis revealed many necrotic and secondarily inflamed myomata along with chronically infected tubes."

"It was felt," he said, in commenting on the case, "that this massive degenerated and necrotic myoma was the source of the markedly septic state which threatened the life of the patient. Removal was critical and decisive."

The second case—which had a fatal outcome—was that of a pregnant woman, 28, who was admitted in labor at about the 25th week of her pregnancy. Radiography disclosed a "massive soft-tissue mass resembling a fibroid filling the entire abdominal cavity." The infant was removed by cesarean section "with some difficulty" because of the many massive subserous fibroids in the lower and upper segments of the uterus. The patient's condition deteriorated postoperatively, and at surgery undertaken to remove the mass in the abdomen and pelvis, she died of cardiac arrest.

The principal diagnosis in this case, said Dr. Weekes, was "infarcted leiomyomata of the uterus with pelvic peritonitis and intestinal obstruction (paralytic ileus)."

"Although the benign nature of fibroid has long been established and need not be challenged here," the physician commented, "there must be concern about the massive grotesque fibroid which becomes a clinical problem because of its inherent size and pressure changes on contiguous organs, the bowel in particular."

He noted that the "sheer size of both of these tumors was so marked that they caused pressure on the bowel [leading to] obstruction." An additional hazard of such tumors, Dr. Weekes said, is that they may undergo changes due to infection in patients with endometritis. With extension of infection to the tumor, the entire peritoneal cavities may become involved, "as they did in both cases."

"Definitive treatment," he concluded, "should be directed to these massive tumors, whether it be myomectomy or hysterectomy, before it is complicated by degeneration, infection, intestinal obstruction, or pregnancy."

Frog Aids Nerve Study

MTI Photo

Colombian kokoi frogs, whose skin contains one of the most toxic poisons known, batrachotoxin, are part of research on electric activity of nerves and muscles at National Institute of Arthritis and Metabolic Diseases. Aim is to resolve frogs' venom resistance.

Early Therapy Urged For Hypothyroidism

Medical Tribune Report

ATLANTIC CITY, N.J.—More evidence in favor of the earliest possible treatment of congenital hypothyroidism was reported by University of Pittsburgh investigators, who believe the incidence of the athyreotic form of the disease is high enough to warrant neonatal screening programs.

The report was presented here at a joint session of the Society for Pediatric Research and the American Pediatric Society.

Dr. Alan Klein and associates studied Stanford-Binet intelligence test results at the age of three in four different groups of congenital hypothyroids whose treatment had begun before the age of three months, three to four months, five to six months, or after six months.

While the data were variable and the standard deviations were large, the average I.Q. (89) of children treated before three months was significantly better than in any of the other groups, which averaged 70, 71, and 54, respectively.

The authors, also including Dr. Stephanie Meltzer and Frederic M. Kenny, said the clinical picture in athyreosis is not usually obvious at three months, when treatment would best begin.

Grant Backs Study of Problems Due to Forestalling of Death

Medical Tribune Report

HASTINGS-ON-HUDSON, N.Y.—The New York Foundation has announced a $25,000 grant for a study of the new and urgent problems caused by man's growing ability to forestall death.

The grant will support a year's work of the Task Force on Death and Dying, one of several research panels of the Institute of Society, Ethics, and the Life Sciences.

Cochairmen of the task force are Drs. Leon R. Kass, executive secretary of the National Academy of Sciences' Committee on the Life Sciences and Social Policy, and Eric J. Cassell, Associate Professor of Medicine at Mount Sinai School of Medicine.

Chess Solution

From the position Black forced the win of at least the exchange with the surprising 1 . . . B-Q6!!, threatening both...BxB and...QxR.

Parkinson Effects Relieved By Amantadine Hydrochloride

Medical Tribune Report

ATLANTIC CITY, N.J.—Amantadine hydrochloride ameliorated drug-induced parkinsonian symptoms in nine of 10 psychiatric patients with minimal side effects and no adverse effect upon the patients' mental status, according to Drs. John T. Kelly and Faruk S. Abuzzahab, of the University of Minnesota Medical School.

During a seven-day trial, the drug was most effective against akathisia and dystonia, commonly the most difficult to treat of drug-induced extrapyramidal symptoms, they told the 72nd annual meeting of the American Society for Chemical Pharmacology and Therapeutics here.

The subjects were adult hospitalized patients, six with moderate, three with marked, and one with severe psychosis, all exhibiting typical extrapyramidal side effects of rigidity, tremor, dystonia, and akathisia while taking neuroleptic medication.

Four of the patients received 100 mg. amantadine per day, and six received 200 mg. Most patients promptly responded with reduction of symptoms, both subjectively and objectively, Drs. Kelly and Abuzzahab said.

Effect Marked in Five

The therapeutic effect of amantadine was judged to be marked in five patients, moderate in four, and minimal in one. Most of the residual symptoms occurred in patients receiving unusually high doses of neuroleptic drugs.

Amantadine was discontinued in two patients early in the study, in one because of a generalized urticarial reaction that had been minimally present prior to the administration of amantadine, and in the other because of unyielding psychotic symptoms that necessitated daily increases in neuroleptic drug dose. The latter patient had a good initial response to amantadine, but symptoms re-emerged as the dose of amantadine was kept constant and the neuroleptic was increased.

Mental confusion and toxic psychosis, such as have sometimes been reported with therapeutic doses of the commonly used antiparkinsonian drugs, were not observed in this study, but this may have been related to the fact that the patients were receiving antipsychotic medications, the physicians said.

Cirrhosis of Liver Patients Aided by Kanamycin

► Both oral and parenteral kanamycin led to decreased blood and urine ammonia and urine amino acids in 14 patients with cirrhosis of the liver, reported Dr. Thomas F. Nelson, Jr., D. Carlo E. Grossi, and Bo Pritz, Ph.D., of St. Vincent's Hospital and the New York University School of Medicine. No change was seen in the patients' mildly elevated plasma amino acids, however, they said.

Four of the patients were studied before and after shunt, and 10 had chronic hepatic encephalopathy. The antibiotic was given orally for three days, followed by a rest period, then intramuscularly for three days.

Six of the 10 patients with chronic hepatic encephalopathy improved on intramuscular kanamycin.

Decreased amino acid loss in urine suggests a beneficial effect on the turnover of amino acids in the liver, the investigators declared. They postulated that parenteral antibiotics may limit bacterial growth in intestinal lumen.

There is a need for reappraisal of possible beneficial effects of parenteral antibiotics in amino acid metabolism in cirrhosis of the liver, they concluded.

Physician's Aid For Parents of The Handicapped

Medical Tribune Report

MIAMI, FLA.—The physician who must break the news to parents that their baby is handicapped can provide more effective and compassionate counseling if he understands the complex emotions aroused by this situation, a British medical educator said here at an international symposium on "The Ecology of the Child and Human Development."

Dr. Ronald MacKeith, of Guy's Hospital, London, pointed out that two parental reactions must be recognized as basic and biologic—an urge to protect the helpless infant and on the other hand a feeling of revulsion at the abnormal.

The first of these is accepted while the second is frowned upon in our present culture, he told the symposium, which was presented by the University of Miami Mailman Center for Child Development. Yet revulsion is equally normal biologically, he emphasized, "and the doctor will not be judgmental when he observes it."

In Dr. MacKeith's experience, a number of other emotional states can be expected in parents who learn that their child is handicapped:

- Feelings of inadequacy about reproductive competency. These can be "deeply disturbing," particularly if the abnormal child is a firstborn. Parents see themselves as having failed once, hence the fear of recurrence "must always be ventilated, whether or not the parents themselves open the topic."
- Feelings of inadequacy in rearing the child. Like many mothers of normal firstborn children, the mother of a handicapped child may worry about her competency to provide care.
- Feelings of bereavement, with attendant emotions of anger and grief. Parents have lost "the expected, lovable, ordinary child" and possibly the child they had hoped would fulfill their own frustrated desires for achievement.

Anger at such bereavement—while not always acknowledged—can be directed at "Fate, God, or the doctors," and may be combined with the protest: "Why should this happen to me?"

Grief may be felt either as mourning or as an overwhelming sense of hopelessness and apathy. Adjustment always takes time, "however skilled the doctor."

- Shock and surprise. Combined with these emotions may be a sense of helplessness akin to the hopelessness of grief. And some parents will react by feeling that "this can't have happened—I may wake up tomorrow and find my child is normal."
- Guilt, often as a feeling of personal responsibility for what has gone wrong. There can also be overtones of conscience, with a sense of being punished.

A special burden exists for the parent who passed on a dominantly transmitted defect, but even if the disorder is inherited recessively, and both parents contributed a deleterious gene, "all too often" one parent—usually the mother—believes she is at fault.

- Embarrassment. Its intensity varies according to how dependent the parents may be on approval of other people and according to the kinds of reaction displayed by friends and neighbors.

Each of these feelings can evoke a spectrum of behavior patterns in the parents of the handicapped child, Dr. MacKeith noted. Thus, the biologic protective feeling may lead the mother to provide "unusually lavish" care, while revulsion for the abnormal may show itself either as coldness or as "dutiful" care so intensified by guilt and overcompensation that it becomes lavish.

Dr. MacKeith cited other easily traceable patterns of behavior: general anxiety and lack of self-confidence, the "enormous driving energy" of some parents' groups devoted to a particular handicap, depression, apathy, refusal to believe the doctor's diagnosis, avoidance of social contacts.

Medicolegal Report

Sterilization Operation Ruling Is Reversed by Appeals Court

Medical Tribune Report

CHICAGO—In a suit against a physician for alleged negligence in the performance of a sterilization operation, the highest court of Kentucky has ruled that the statute of limitations does not begin to run until the date of discovery of pregnancy.

The physician performed a sterilization operation in September, 1966, according to a report on the case by the office of the general counsel of the American Medical Association, here. The woman became pregnant in November, 1967, the pregnancy was discovered in January, 1968, and the child was born the following August.

In November, 1968 the negligence suit against the physician was filed by the woman and her husband, seeking damages for medical expenses, loss of consortium, and the expenses of raising the child to majority. The trial court dismissed the suit, ruling that action was barred by the one-year statute of limitations.

On appeal, the judgment of the trial court was reversed on the ground that the cause of action did not accrue until discovery of the pregnancy. (*Tomlinson v. Siehl*, 459 S.W.2d 166 [Ky. Ct. of App., June 5, 1970; rehearing denied, Nov. 27, 1970].)

Standard of Care for Specialist

In another case, the highest court of Michigan ruled that the standard of care for a specialist is not governed by geographic conditions but by the reasonable practice of medicine in the light of present-day scientific knowledge.

The trial court, in an action against two pediatricians for alleged malpractice in failure to timely diagnose PKU, had overturned the jury vedrict of $80,000 and granted the pediatricians' motion for judgment, holding that two of the expert witnesses who had testified against them were not competent on standards of care in the locality in question.

One of these witnesses, a world-renowned expert on PKU, testified that medicines and diets were available for treatment of the child and that it was established standard for a board-certified pediatrician to perform the tests that, he said, were routine in hospitals across the nation. Another recognized expert on PKU also testified that a test for PKU should have been made in evaluating a mentally retarded child, and also testified on the standard of care in communities similar to the pediatrician's.

Three physicians, testifying for the pediatricians, said it was not common practice for pediatricians in that area to test for PKU at that time, although they admitted that most pediatricians knew of the disease and of available treatment.

On appeal, the court said that the considerations that allowed the area practice to set the standard for general practitioners were not relevant to metropolitan specialists. (*Naccarato v. Grob*, 180 N.W. 2d 788 [Mich. Sup. Ct., Nov. 12, 1970].)

Doctor-Patient Privilege

A Federal trial court in Mississippi held that the physician-patient privilege does not apply to a physician who examines an injured person at the request of the person being sued.

A man who had brought suit for personal injuries was examined by a neurosurgeon chosen by the person sued, whose attorneys then sought to take the neurosurgeon's deposition. The injured person objected, claiming the physician-patient privilege.

The court ruled that the privilege did not apply, noting that it is largely a creature of state statute, and that there is no federally created physician-patient privilege. Privilege attaches only to a patient's own physicians, the court reasoned. According to its interpretation, the rule that permits the physical examination of an injured litigant also permits calling the examining physician as a witness. (*Hardy v. Riser*, 309 F. Supp. 1234 [D. C., Miss., Feb 9, 1970].)

Newly Found Infectious Particle

Newly identified plant pathogen—80 times smaller than any known virus—may shed light on human diseases such as multiple sclerosis, infectious hepatitis, and some types of cancers, stresses its discoverer, Theodor Diener, Ph.D., of the U.S. Department of Agriculture. Above, in procedure to isolate "viroid," Dr. Diener (r.) and technician Dennis Smith load nucleic acid into tube during electrophoresis test.

Domestic Meetings

Oct. 21-23 ....Nevada State Medical Association, *Las Vegas*
Oct. 22-30 ....American Society of Clinical Pathologists, *Boston*
Oct. 22-30 ....College of American Pathologists, *Boston*
Oct. 23-28 ....National Practice Management and Investment Seminar, 45th Annual, *Honolulu*
Oct. 23-27 ....Eastern Orthopaedic Association, *White Sulphur Springs, W. Va.*
Oct. 24-28 ....American College of Chest Physicians, *Philadelphia*
Oct. 24-30 ....American College of Gastroenterology, *Atlanta, Ga.*
Oct. 26-27 ....New York State Health Department, Birth Defects Institute, Second Symposium on "Heredity and Society," *Albany*
Oct. 27-30 ....Gerontological Society, *Houston, Tex.*
Oct. 27-30 ....American Urological Association, Mid-Atlantic Section, *Williamsburg, Va.*
Oct. 27-30 ....National Hemophilia Foundation, *Cleveland*
Oct. 29-30 ....American Medical Society on Alcoholism, *Baltimore*
Oct. 29-31 ....American Society of Therapeutic Radiologists, *Phoenix, Ariz.*
Oct. 29-Nov. 1 ..... Association of American Medical Colleges, *Washington*
Oct. 30 .....Society of Teachers of Family Medicine, *Washington*

Odds and Ends

● "The husband who needles and berates his wife for being fat may be the main reason she became, and stayed, that way," says a release from the University of Michigan.

It goes on to report that a professor at the university's School of Social Work has discovered that some husbands want their wives fat to keep them from promiscuity, or because they think it's attractive, or for "personal oneupmanship". We assume these husbands are not the needlers and beraters but confess to a certain amount of confusion.

This confusion mounts to a peak at the end of the release with the statement that the professor "has been 85 per cent successful with married women, compared to 30 per cent success with unmarried. 'The husband's assistance in managing his wife's eating behavior has been a big factor in the diet's results,' he observes. 'Men control their wives' weight.'"

Oh well, that reducing business never *was* simple!

● The anonymous contributor from West Virginia University Medical Center has sent us, from an unnamed source, the following notice:

"The Florida Advisory Group adopted unanimously a motion commending work of the Florida Regional Medical Program staff in connection with the developing FAG activities."

● The chief copy editor has called our attention to Webster II's definition of "ugglesome", to wit: "*adj.* [see ug; 1st–some.] Horrible. *Archaic.*"

Naturally, we went to see ug and found "*n.* a feeling or object of disgust."

He says that ug is handy to have around for Scrabble, and we think it's helpful, as a safety valve, while reading newspapers.

● Science turns up in odd places, but *Nature* has located one of the oddest: the back of Nicaraguan postage stamps.

We gather that the Nicaraguan government has issued a series of 10 stamps to commemorate "the 10 mathematical equations that changed the face of the Earth." The face of the stamp states and illustrates the equation; an explanation of it appears on the back.

The cheapest equation (on the 10-centavo stamp) is $1+1=2$, *Nature* reports; for twice that, you can get $e=mc^2$; and for a two-córdoba airmail stamp, you get the most expensive: Napier on logarithms or the Maxfield equation, whatever either of them may be.

● We pass on, for what it's worth, the following news from a Harvard University press release:

"The man-on-the-street thinks achievements of modern technology such as television, computers, and automation are good for him, but he is doubtful about the benefits of the space program. He believes there is such a thing as the military-industrial complex, but he doesn't know what it consists of."

We wonder what street the investigators were on.

● We've just discovered that proctology has a patron saint: Saint Fiacre.

Not surprisingly, our source is the *American Journal of Proctology* which reports: " . . . on the one hand he was the protector of gardens and on the other hand he was also the healer of all intestinal affections and hemorrhoids."

● A letter to the editor of the *New England Journal of Medicine*, birthplace of the Chinese restaurant syndrome, offers the Japanese restaurant syndrome.

Readers are invited to contribute items of 100 words or less to this column. Contributions should be mailed to MEDICAL TRIBUNE, *110 East 59th St., New York, N. Y., 10022.*

A Warning to Young Swimmers On Underwater Competition

Medical Tribune Report

NEW YORK—A warning that children should not be permitted or encouraged to engage in competitive underwater swimming under any circumstances because of the extreme perils of possible hypoxia was voiced here by Dr. Albert B. Craig, Jr., Associate Professor of Physiology at the University of Rochester School of Medicine and Dentistry.

"Loss of consciousness during underwater swimming can occur when the swimmer is trying to set a record for distance or time," he told a meeting held by the Committee on the Medical Aspects of Sports of the Medical Society of the State of New York.

"Invariably, the subject voluntarily hyperventilates before the swim. Loss of consciousness occurs with little or no warning and the subject may continue to swim for a time despite such loss. People watching often do not realize that the swimmer is in trouble until final collapse. Death is a common result," he stated.

Dr. Craig explained that if a swimmer's breath hold is done following normal respiration, the partial pressure of carbon dioxide increases to the point at which he can no longer resist the urge to breathe again. In other words, he has reached "the breaking point."

"This breaking point signal," he continued, "occurs even if he is exercising. Under these conditions the partial pressure of oxygen decreases but does not get to levels which are dangerous. On the other hand, if the subject hyperventilates and 'blows off' the carbon dioxide before the breath hold, the increase of the carbon dioxide during the breath hold is slower and the breath-holding ability is increased.

"Under these conditions, the 'breaking point' may not be reached before the partial pressure of oxygen decreases to a dangerously low value. When exercise is combined with the breath hold following hyperventilation, the partial pressure of oxygen decreases even faster and hypoxia is quite easy to produce. The subject can pass out even without feeling the urge to breathe again. This type of loss of consciousness due to hypoxia occurs with little or no warning, and until the final moment of complete collapse the subject may continue what he is doing."

DR. CRAIG

Dr. Craig cited 52 cases of loss of consciousness while swimming, all of whom were in the 12-to-33-year age range with most between 16 and 20 years old. Only two of the victims were girls. Thirty-six of 46 cases in which the location of the accident was known occurred in guarded pools. There were 21 deaths in the series.

He stressed that loss of consciousness while swimming under water is preventable if people are taught to swim under the surface of the water as they are taught to swim on the surface. Furthermore, swimmers should be cautioned not to attempt to establish records for time or distance and should know that hyperventilation enhances the danger of loss of consciousness.